AUTHOR INDEX

to Oceanographic Literature Review,
1992, Vol. 39(1-6), pp. 1-532
citations 92:0001-92:3262

Note that the leading numerals '92' are omitted from the access numbers; also note that, strictly speaking, this is an index of names, not authors;if an author's name has appeared two ways in the literature, it may appear two ways here. Finally note, if doing multi-year searches, that through Volume 36 annual cumulative indexes were published. In Volume 37 there are four quarterly non-cumulative indexes to search; from Volume 38 forward, two semiannual non-cumulative indexes are provided.

Aagaard, A. 914
Aagaard, K. 2419
Aagaard, Troels 247
Aarnio, Katri 966, 3203
Aas, Eyvind 1258
Abarbanel, H.D.I. 2943
Abbott, D.H. 1475
Abbott, M.R. 633, 921, 935, 1915
Abe, Kuniaki 49
Ablanedo, Nora 2320
Able, K.W. 2252
Abrahamsson, Katarina 225
Abramov, A.V. 393
Abrantes, F.F. 1417
Abrantes, Fatima 307
Abu El-Ella, Ramadan 3050
ACCRETE 360
Acevedo, Roberto 1027
Achauer, Ulrich 2643
Achuthankutty, C.T. 990, 1600
Ackley, S.F. 1848
Acosta Pomar, M.L.C. 2684
Acton, G.D. 348, 853
Adamkiewicz-Chojnacka, B. 3155
Adams, M.S. 1019, 1020
Adamson, Toby 3207
Aftabi, Alijan 1985
Agar, S.M. 878
Aggrey, K.E. 877
Aghib, F.S. 2043, 2153
Agnew, D.C. 1358, 1359
Agnon, Amotz 2627
Agnon, Yehuda 2390
Aharon, Paul 1372, 1378
Ainley, D.G. 459
Airaud-Crumiere, C. 1376
Aksnes, D.L. 1607
Al-Aasm, I.S. 302
Al-Abdul-Razzaq, Sabeekah 2273
Alamri, A.M. 2635
Albaiz, A.O. 1236
Albanis, T.A. 226
Alber, Merryl 959
Alberic, P. 213
Albrecht, B.A. 143
Alessandrini, B. 429
Alexander, C.R. 266, 2044
Alexander, Robert 3132
Alexandrou, D. 87
Al-Harthy, F.T. 2355
Al-Harthy, Firdaus 1083
Ali-Khan, Sabahat 514
Allan, R.J. 137
Allan, T.D. 731
Allchin, C.R. 2586
Alldredge, A.L. 2984
Allen, Charles 1732
Allen, J.R.L. 267
Allen, J.S. 651, 661
Aller, C. 276
Aller, J.Y. 2248
Aller, R.C. 216, 466, 2248
Alley, R.B. 2456
Allison, P.A. 846
Allmendinger, R.W. 1999
Alm, Göran 2918
Almogi-Labin, Ahuva 1014
Alongi, D.M. 208, 227
Alonso, Belén 242
Altabet, M.A. 2573
Althaus, M. 229
Alzieu, C. 3239
Alzieu, Claude 3240
Amajor, L.C. 1395
Amakawa, Hiroshi 3138
Ambraseys, N.N. 2636
Ambrosius, B.A.C. 623
American Meteorological Society, 610
Amiard, J.-C. 228
Aminot, Alain 784
Amon, R.M.W. 2702, 2703
Amor, A. 2704
Amos, Anthony 1132
Amos, C.L. 664, 2030, 2350
Anastasakis, G. 349
Andersen, B.B. 914
Andersen, K.-J. 1309
Andersen, T.B. 398
Andersen, Tom 382
Andersin, A.-B. 1631
Anderson, D.M. 1025
Anderson, H.J. 2637
Anderson, J.B. 2045, 2046, 2048, 2079
Anderson, L.G. 1271
Anderson, R. 3003
Anderson, R.G. 2012
Anderson, Robert 2985
Anderson, T.L. 768
André, Carl 2247
Andre, J.M. 2313
Andreae, T.W. 1936
Andrée, J.-M. 2686
Andres, H.G. 3183
Andrew, N.L. 1632
Andrews, J.T. 2047
Andreyev, A.G. 193
Andryushchenko, Ye.G. 1138
Ansari, Z.A. 2705
Ansbro, A.P. 704
Antoine, E. 2720
Antokol'skiy, L.M. 1569
Antonsen, Petter 277
Antropov, I.V. 116
Anuchin, V.N. 1875
Aoki, Saburo 278, 1384
Aoki, Shigeaki 18
Aono, Tatsuo 1325
Appell, G.F. 1140
Appell, Gerald 1139
Apperson, K.D. 2131
Apresyan, L.A. 1761
Apte, S.C. 165
Arbouille, Didier 1365
Archer, David 1380
Arculus, R.J. 1495
Aref, Hassan 1889
Argus, D.F. 2121
Aristov, S.N. 1890
Arkani-Hamed, J. 332
Arkhipov, B.V. 1237
Arking, Albert 149
Armbrust, K.L. 798
Armi, Laurence 1193
Armonies, Werner 463
Armstrong, D.A. 474, 512, 2798
Armstrong, R. 281
Arndt, Hartmut 3150
Arnold, J.M. 704
Arntz, W. 2807
Arntz, W.E. 999
Arpe, K. 2967
Asavin, A.M. 394
Ashalatha, B. 2638
Ashcroft, J. 732
Ashley, G.M. 2046, 2079
Ashton, A. 1028
Asmus, Harald 478
Asmus, R.M. 478
Assinder, D.J. 194
Atakan, K. 2632
Atema, Jelle 1304
Athalye, R.P. 544
Atkinson, L.P. 2412, 3256
Atlas, Elliot 1937
Atnashev, V.B. 2186
Attema, E.P.W. 1049
Atwater, B.F. 308
Au, D.W. 1622
Au, W.W.L. 1096
Auad, Guillermo 1794
Auerbach, P.S. 1082
Augstein, Ernst 3232
Austen, M.C. 2706
Austin, J.A. Jr. 383
Austin, R.L. 2334
Austrheim, Håkon 2639
Auzende, J.-M. 3057
Averbakh, V.S. 1851
Avila, L.A. 757, 758
Avise, J.C. 956
Avraham, Sophie 1014
Awadallah, S.A. 279
Ayers, G.P. 1943
Ayukai, Tenshi 435
Azzaria, L.M. 1985

Babalola, O.O. 1477
Babcock, R.C. 993
BABEL Working Group , 1511
Babu, M.T. 1795
Bacon, M.P. 2574, 3002
Bacon, S. 2912
Badan-Dangon, Antoine 1284
Badawy, M.I. 1083, 2355
Badran, F. 2490
Baeyens, W. 1986
Bagriantsev, Nikolai 3232
Bahar, Ezekiel 83, 1171
Baik, J.-J. 1290
Bailey, G.W. 2855, 2856
Bailey, S.K. 3202, 3205
Bailey, T.G. 1952
Bailiff, M.D. 1585
Baines, S.B. 3151
Baird, D. 787, 918
Bak, R.P.M. 967
Bakan, S. 756
Baker, D.J. 1050
Baker, P.A. 3058
Baker, T.F. 1819
Baker, W.E. 2527
Balch, W.M. 1692
Baldini, M.D. 2837
Baldridge, W.S. 3098
Balkas, T.I. 1997
Ballschmiter, K. 2584
Banakar, V.K. 2658
Band, G.C. 1563
Bando, Kozo 65
Bandy, A.R. 181
Banerjee, R. 426, 1570

Banfield, J.D. 1199
Bankston, D.C. 548
Banse, Karl 2394, 2669
Bansod, S.D. 2539
Bapat, V.J. 341
Barange, M. 1334
Barange, Manuel 1000
Barber, D.G. 1200, 2919
Barbosa, A. 2721
Barcellos, Christovam 3036
Barcilon Albert 2945
Bard, Edouard 832
Barenblatt, G.I. 1876
Barg, E. 2480
Barghigiani, G. 1699
Barilko, Sh.I. 1852
Barkai, Amos 3179
Barker, L.H. 912
Barker, P.F. 2628
Barksdale, Brett 921
Barminski, R.F. Jr. 687
Barnard, J.L. 507, 508, 509, 1671, 2292
Barnes, P.W. 1209
Barnier, B. 8
Barnier, Bernard 2897
Baron, Y. 1704
Barret, Jean 572
Barrett, R.T. 1580
Barrie, J.V. 2013, 2050
Barrier, Pascal 2125
Barros, N.B. 2838
Barry, R.G. 2864
Barstow, S.F. 50
Barsukov, V.L. 872
Bartek, L.R. 2048
Barth, G.A. 1512
Barth, H.G. 166
Bartlo, J.A. 759
Bartole, Roberto 350
Barton, E.D. 443, 639
Barton, P.J. 899
Bartsch, I. 2780
Bass, P.D. 1140
Basu, A.R. 388
Basu, B.K. 2520
Bate, G.C. 1587, 1588
Bates, J.J. 2491
Bates, N.R. 2605
Bates, T.S. 2550
Bathmann, U. 788
Bathmann, U.V. 2208
Batiza, Rodey 3107, 3124
Batley, G.E. 799
Battisti, T.M. 2478
Baturin, G.N. 2190
Baudinet, Dominique 1950
Baudry, Nicolas 1362
Bauer, J. 2898
Bauer, J.E. 167
Baumann, M.E.M. 2682
Baumer, Alain 1373
Baxter, Murdoch 184
Bayed, Abdellatif 3181
Bea, R.G. 1723
Beal, R.C. 683
Beatley, Timothy 2875
Beaufort, Luc 3078
Bechtold, Peter 1286
Beck, C.A. 2838
Beck, M.E. Jr. 1486
Beck, S.L. 901
Becker, Alex 2930
Becker, Bernd 2080
Becker, Keir 1473
Beckmann, Aike 669
Bedford, A. 1225
Beechey, J. 1961
Beer, Tom 2343
Bei, F. 3204
Beiersdorf, Helmut 3143
Beljaars, A.C.M. 2954
Belknap, D.F. 1396, 2016, 2049
Bell, R.E. 2114
Bell, S.C. 820
Bell, S.S. 479
Belliveau, D.J. 1146
Bellon, H. 3106
Belobrov, A.A. 1838
Belonozhko, V.P. 1796
Belperio, A.P. 2027
Belyayev, I.I. 333
Benaïm, J.-Y. 168
Ben-Avraham, Zvi 3112
Benilov, E.S. 2942
Ben-Menahem, Ari 2640, 2663
Benner, Ronald 927, 2986
Bennett, S.L. 1131
Bennike, Ole 2698
Benoit, J.M. 3049
Benoit, Robert 1949
Bentham, P. 1418
Benton, Tim 589
Bercovici, David 2137
Berdalet, Elisa 915
Berelson, W.M. 2899
Berezutskii, A.V. 2903
Berger, A. 1903
Berger, Andre 833
Berger, G.W. 1385, 3056
Berger, W.H. 1442, 2094, 2113, 2608
Bergh, S.G. 2629
Berghahn, Rüdiger 1623
Bergman, Charles 2890
Berkhout, A.J. 2937
Berman, Jody 1577
Bernal, Patricio 541
Bernasconi, M.P. 1443
Bernat, Michel 1373
Bernoulli, Daniel 1545, 2043
Bernstein, R.E. 2987
Berresheim, H. 1938
Berrow, S.D. 2314
Berry, A.S. 2551
Berry, P.F. 2812
Berry, Paula 642
Bersch, M. 2198
Berthelier, A. 1464
Bertness, M.D. 3146
Best, M.E. 2187
Betzer, P.R. 2987
Beukema, J.J. 2707, 2799
Beverton, R.J.H. 1623
Beydoun, Z.R. 3088
Bezrukov, L.B. 1900
Bhargava, D.S. 1335
Bhattacharya, G.C. 1496
Bhosale, Ujjwal 3037
Bialas, J. 409
Bibee, L.D. 1524
Biddanda, B. 2765
Bidigare, R.R. 2978
Bidleman, T.F. 2585
Bigot, M. 807
Billington, Neil 3152
Bina, C.R. 879
Bingham, F.M. 652
Biolley, F.M. 117
Biolzi, Milena 2613
Bird, D.F. 1652
Bird, Jane 2379
Birrien, J.L. 436
Bisagni, J.J. 2900
Biscaye, P.E. 2988
Bishop, J.K.B. 1256, 2989
Biswas, N.C. 2545
Bjørge, Arne 1624
Björk, Sven 3251
Bjørnsen, P.K. 922, 1022
Björnsson, S. 1513
Black, K.P. 968
Black, M.L. 1292
Blackburn, T.H. 2257
Blackman, D.K. 351
Blainey, B.L. 497
Blaise, Bertrand 302
Blake, J.A. 2265
Blake, R.A. 2448
Blake, R.W. 1612
Blanc, Frédérique 1123
Blanck, Hans 3199
Bleil, Ulrich 1404
Bliven, L.F. 684
Block, A. 1386
Blodget, H.W. 1366
Blomqvist, Sven 233
Blumenthal, M.B. 1272
Blundell, J.R. 1885
Blust, Ronny 2839
Boccaletti, Mario 1487
Bock, G. 2149
Boczar-Karakiewicz, B. 1839
Boden, Linda 1217
Bodkin, J.L. 1048
Bodri, Louise 1471
Bøe, Reidulv 1419
Boers, J.J. 2217
Bogdanov, N.A. 1420
Bogomolov, V.A. 1226
Boguslavskiy, P.E. 1959
Bohor, B.F. 324
Bois, P.A. 1238
Boisson, D. 2128
Boland, G.S. 2708
Bollens, S.M. 2209
Bol'shakov, A.N. 1823
Bolton, J.J. 2305
Boltovskoy, Demetrio 2103
Boltovskoy, Esteban 521
Bona, J.L. 1839
Bondarenko, V.I. 1399
Böning, C.W. 1768
Bonsdorff, Erik 966, 3203
Booth, D.A. 1250, 1797
Bordovskiy, O.K. 1344
Borisov, S.B. 1141
Born, G.H. 2346
Bornhold, B.D. 2050
Borole, D.V. 2658
Bos, W.G. 1142
Bosart, L.F. 759
Boschi, E. 234
Bösenberg, Jens 1176
Bosley, K.T. 638
Botello, A.V. 1351
Bothner, M.H. 2023
Bott, M.H.P. 2150, 2178
Bottjer, D.J. 1444
Botz, R. 280
Boudou, A. 563, 594, 2313
Boudreau, P.R. 2199
Bouillon, Jean 2266
Boukthir, Moncef 2897
Boulton, G.S. 260
Bourgois, J. 1478
Bourlès, D.L. 3059
Bousfield, E.L. 1672
Bowen, B.W. 956
Bower, Bruce 601
Bowers, D.G. 2427
Bowlin, J.B. 1217
Bowman, M.J. 2941
Boyd, I.L. 957
Boyd, R. 2056
Boyer, D.L. 117, 1164, 1240, 1820
Boyle, E.A. 797, 834, 2583, 2616
Boysen-Ennen, E. 2670
Brachert, T.C. 1374
Braddock, R.D. 2327
Bradley, D.C. 2151
Bradley, L.M. 1456
Bradley, S.E. 1143
Brady, P.V. 1904
Braman, D.R. 835
Brand, Uwe 2605
Brandt, Angelika 1001
Bratbak, Gunnar 489
Bray, N.A. 672
Brekhovskikh, A.L. 1769
Bressan, Monica 556
Breuel, Günther 3149
Breuer, Georg 2364
Brew, D.A. 2152
Brey, Thomas 2239
Bricelj, V.M. 981
Brink, K.H. 653, 1112
Brinkhurst, R.O. 2240
Brinton, E. 1684
Brinton, Edward 1673, 1674, 1678
Briones-Fourzán, Patricia 1002
Briscoe, M.G. 2893
Brock, J.C. 2671
Brodholt, John 1527
Broecker, W.S. 2425, 2500
Broman, Dag 1947, 1987, 2315
Bromwich, D.H. 760
Brooks, D.A. 2893
Brooks, J.M. 3221
Brooks, P.W. 3132
Broom, M.J. 590
Broome, S.W. 171
Brophy, T.G. 2891
Brousse, Robert 375
Brousseau, Pierre 486
Brown, C.R. 2719
Brown, J. 1725
Brown, M.G. 51
Brown, Neil 1106
Brown, O.B. 2395
Brown, P.C. 1586
Brown, R.A. 140
Brown, R.D. 751
Brownawell, B.J. 2990
Brownlee, D.E. 2196
Bruce, A.J. 2800, 2801, 2802
Brumley, B.H. 1144
Brun-Cottan, J.C. 1977
Brunel, Pierre 2803
Brunetti, Riccardo 556
Bruni, V. 2684
Bruns, K. 2722
Brusca, R.C. 2274
Brush, G.S. 2884
Bryan, G.W. 3206, 3215
Bryan, Kirk 1261, 2375
Bryden, H.L. 634, 635
Bryskin, A.V. 894
Bubnov, V.A. 1770
Buchsbaum, Robert 480
Buck, K.R. 923, 953, 2214
Buckingham, M.J. 84
Buckley, D.E. 2031
Buckley, M.K. 251
Buckley, R.C. 1084
Bucklin, Ann 1003
Buczynski, Chris 268
Budd, W.F. 2933
Buddemeier, R.W. 1974
Budich, R.G. 1768
Buesseler, K.O. 1336
Bufe, C.G. 2635
Bugnon, F.J. 1145
Buhl-Jensen, L. 506
Bukhanevich, I.B. 580
Bulashevich, Yu.P. 399
Bulatov, N.V. 1882
Bulgakov, N.P. 1853
Bunchuk, A.V. 2191
Bunt, J.S. 481, 484
Burba, G.A. 1510
Burcharth, H.F. 584
Burdige, D.J. 488
Burdsall, E.L. 2865
Burke, J. 2304
Burne, John 605

Burnell, D.K. 306
Burnett, Jackie 2109
Burns, T.P. 1578
Burov, B.A. 82
Burrage, D.M. 2901
Burt, G.R. 3210
Businger, Steven 1290
Bussarawit, Nipavan 493
Busson, Georges 1445
Butala, P.P. 2546
Butler, A.J. 3165
Butler, J.H. 1962
Butler, R.F. 352
Butman, Bradford 801
Buzyna, G. 2531
Bybell, L.M. 2591
Bychkov, A.S. 37
Byman, M.W. 688

Cabezali, C.B. 2837
Cadet, D.L. 1302
Cahoon, L.B. 2234
Cai, Qinbing 7
Cairns, John Jr. 1090, 1660
Caldeira, Ken 1421
Calhoun, J.A. 2550
Callan, M. 705
Calmant, Stéphane 1362
Calon, Tom 1556
Calvert, S.E. 292, 1387
Calvo, C. 3038
Camacho, Fernando 1051
Camassa, R. 2913
Cambon, J.-P. 793
Cameron,. A.M. 2241
Cameron, A.M. 2709
Cameron, B.E.B. 848
Camp, V.E. 353
Campbell, A.C. 2991, 3061
Campbell, E.E. 1587
Campbell, I.H. 2158
Campbell, R.R. 1733
Campbell, W.J. 79
Campden, D.A. 3113
Campos, E.J.D. 1172
Camus, Yves 228
Canals-Artigas, M. 822
Cande, S.C. 2625
Cannat, Mathilde 880
Cannicci, S. 2822
Cannon, G.A. 1130, 2600
Cao, Deming 2909
Capon, R.J. 796
Caramés, Andrea 3079
Carbotte, S.M. 895
Carder, K.L. 2672
Cardoso, J.N. 1946
Cardwell, R.K. 401
Carey, A.G. Jr. 2242
Carey, S.N. 2039
Carey, Steven 1504
Carey, W.M. 85
Carius, R.T. 2748
Carlisle, D.B. 835
Carlson, D.J. 917
Carlson, Dave 2992
Carlson, L. 1029
Carlton, J.T. 1004, 1577
Carmack, E.C. 3257
Carman, K.R. 1574
Carola, Marta 1000
Caron, D.A. 2673
Carowan, Glenn 1629
Carpenter, E.J. 3153
Carr, Nicole 958
Carr, Thomas 958
Carraça, S. 546
Carré, C. 2781
Carré, D. 2781
Carreto, J.I. 448
Carrion, Philip 2000
Carsey, F.D. 3237
Cartalis, C.I. 159
Carter, D.J.T. 685, 2912
Carter, J. 2235
Carter, R.W.G. 248
Carton, J.A. 696, 2396
Cartwright, D.E. 1168
Casanova, J.-P. 2782
Casassa, Gino 1843
Casey, J.F. 338
Cashman, K.V. 376
Castelli, A. 2840
Castillo, P.R. 381
Castric-Fey, A. 969
Cathles, L.M. 1422
Catipovic, J.A. 86
Catsiki, V.A. 3204
Cavalierei, D.J. 2920
Cavalieri, D.J. 2921
Caverhill, Carla 946
Cawley, S.J. 1567
Cazenave, Anny 881
Cecere, E. 529
Cereceda, Pilar 2965
Čermák, V. 1470
Čermák, Vladimír 1471
Cess, R.D. 737
Ceuleneer, Georges 897
Chacko, J. 1355
Chafetz, H.S. 268
Chahine, M.T. 2501
Chai, Fei 52
Chalfant, M. 2861
Chalikov, D.V. 697
Challenor, P.G. 686
Chalmers, J.A. 1514
Champ, M.A. 1075
Chan, T.-Y. 2275
Chandramohan, D. 496
Chang, A.T.C. 1289
Chang, Ted 369
Change, Ping 2429
Chanton, J.P. 826
Chao, S.-Y. 1126
Chao, Yi 1808
Chapalamadugu, S. 545
Chapdelaine, Gilles 486
Chapman, A.R.O. 3168
Chapman, D.C. 698, 1165
Chapman, J.W. 1004
Chapman, P. 1818, 2855, 2856
Chapron, Bertrand 684
Charfreitag, O. 2746, 2753
Charlou, J.L. 2601
Charlson, R.J. 768, 2550
Charlton, J.E. 1064
Charrière, Bruno 1966
Chase, C.G. 1502
Chashechkin, Yu.D. 1840
Chassé, C. 969
Chassé, Raynald 924
Chassefiere, B. 822
Chassignet, E.P. 106, 1798
Chatfield, Christopher 2851
Chaudhry, G.R. 545
Chauvel, C. 3104
Chave, A.D. 1909
Chave, E.H. 1633
Chavez, F.P. 923, 925, 953
Cheddadi, Rachid 2081
Cheesman, S.J. 1388
Chekhovich, V.D. 1420, 1479
Chelton, D.B. 633, 926
Chen, C.-S. 2540
Chen, C.-T.A. 217
Chen, Huizhen 2554
Chen, Jinnian 2961
Chen, Jinxing 195
Chen, Jiyu 3068
Chen, Liyi 169
Chen, M.-P. 528
Chen, Muhong 205
Chen, Qili 53
Chen, Shaomou 205
Chen, Shijun 33
Chen, T.-C. 147
Chen, Tegu 2946
Chen, W.-P. 3119
Chen, Xingqun 2674
Chen, Youngshun 400
Chen, Zhongyuan 2662
Chen, Zongyong 41
Cheney, R.E. 3226
Chern, C.-S. 24, 39
Cherneva, Zh.I. 1829
Chernousov, S.Ya. 2059
Chertock, Beth 127
Cheruy, F. 2948
Chester, R. 2551
Chevaldonné, Pierre 2602
Chevrier, Andrée 2803
Chiappone, M. 2710
Chin-Leo, Gerardo 927
Chiocci, F.L. 309
Chisholm, J.R.M. 3166
Chiswell, S.M. 1951
Chiu, J.-M. 401
Cho, K.D. 2403
Cho, K.-D. 2420
Chrétiennot-Dinet, M.-J 1615
Christensen, E.J. 1070
Christensen, U. 1515
Christian, H.A. 281
Christian, R. 929
Christian, R.R. 2723
Christy, J.R. 2497
Chu, P.-S. 138
Chung, T.W. 402
Church, J.A. 2901
Church, T.M. 1939
Churchill, J.H. 35, 2940
Cita, M.B. 2014, 2064, 2153
Clague, D.A. 379, 2142
Clark, J.H.E. 743
Clark, Lisa 3262
Clark, P.F. 2804
Clarke, G.K.C. 1201
Clarke, T. 4, 10
Clavero, V. 791
Claxton, L.D. 1726, 2356
Clay, H.J. 484
Clayton, R.W. 235
Cleary, J.J. 3241
Clegg, S.L. 2574
Clemens, Steven 2082
Clement, B.M. 334
Clement, R.E. 170
Cloetingh, Sierd 1535
Cloke, J. 1944
Coakley, B.J. 2114
Coale, K.H. 1409
Cobo, P. 2937
Cocciaro, Bruno 2430
Cochran, J.R. 2122
Cochrane, K.L. 1586, 2665
Cockcroft, V.G. 2699
Coghlan, Andy 812
Cohen, E.B. 1098
Coimbra, J. 546
Coish, R.A. 1480
Coke, James 1746
Cokelet, E.D. 1130
Colbourne, E.B. 1817
Cole, J. 2084
Coleman, C.O. 507, 508, 509
Coleman, P.J. 3131, 3231
Colin, Christian 2908
Collier, Bob 2993
Collier, R.E. Ll. 2606
Collier, R.W. 2985
Collins, C.D.N. 1516
Collins, E.S. 565
Collins, M.B. 2373
Collins, Michael 2350
Collot, J.-Y. 1484, 2123
Colombo, O.L. 1080
Colwell, R.R. 586
Comber, S.D.W. 165
Combourieu Nebout, Nathalie 2083
Compagno, L.J.V. 2872
Connell, D.W. 2327
Connell, John 1737
Constable, Cathy 342
Conway, K.W. 2104
Cooney, J.J. 1711
Cooper, B.S. 3136
Cooper, J. 1649, 2719
Cooper, J.A.G. 249, 250
Cooper, S.R. 2884
Cordey, R.A. 693
Corey, S. 2818
Corliss, B.H. 522
Cormaci, M. 529
Cornelius, P.F.S. 2797
Cornillon, P.C. 35, 2940
Cornillon, Peter 2395
Cornuelle, B.D. 719
Correia, António 1472
Corrigan, J.D. 859
Costantini, Sergio 1030
Côté, Raynald 924
Coulbourn, W.T. 3099
Court, I.N. 2938
Covey, Curt 612, 1747, 2380
Cowan, E.A. 2051
Coward, M.P. 361
Cowen, J.P. 2256, 2994
Cowles, T.J. 1112
Cox, K.G. 1115
Crabtree, R.E. 2235
Cracknell, A.P. 1213
Craft, C.B. 171
Craig, P.D. 74
Craig, Walter 1239
Crampin, Stuart 3113, 3114
Crane, Kathleen 860, 3060
Cranford, P.J. 1031
Crassous, Philippe 211
Crawford, G.B. 709
Crawford, W.C. 1517
Crawford, W.R. 1763
Creager, K.C. 885
Crema, R. 2840
Crepon, M. 2490
Cresswell, J.E. 587
Crewe, N.F. 1973
Cripps, G.C. 1988
Crisafi, E. 2260
Crisciani, Fulvio 118
Crissman, B.W. 1282
Crittenden, S. 2084
Cronan, D.S. 1415, 3062, 3139, 3141
Cronin, T.M. 2085, 2086, 2607
Crook, K.A.W. 3144, 3231
Crosby, D.G. 798, 1038
Crossen, K.J. 2032
Crossland, C.J. 1634
Croudace, I.W. 2334
Crowell, Mark 251
Crowley, T.J. 738, 1116
Croxall, J.P. 2255
Crutzen, P.J. 1294
Cruz, J. 2964
Cuadrado, D.G. 256
Cubaynes, René 326
Cui, Hong 567
Culik, B.M. 1700
Cullen, J.J. 2832
Cummins, P.F. 1771
Cunningham, Alex 2676
Curiale, J.A. 3132

Curray, J.R. 2154, 2630
Currie, D.J. 1621
Curry, G.B. 2105, 2386
Curtin, Thomas 1139
Cushman-Roisin, Benoit 106
Cutter, G.A. 778, 2995
Czipott, P.V. 1844

Dabbagh, M.E. 359
Dagg, M.J. 2675
Dahle, Salve 3252
Dahlmann, G. 2722
Dailey, M.D. 1625
Dale, V.H. 2664
Daling, P.S. 800, 1085
Daly, Peter 1566
Dalziel, I.W.D. 2134
Dame, R.F. 482
Dame, Richard 483
Damiano, A.-M. 606
Damon, P.E. 779
Darling, R.W.R. 2544
Darovskikh, D.I. 1854
Dart, C.J. 2606
Das, K.P. 2431
Das, S.K. 680
Das, Sunamra 54
D'Asaro, E.A. 2451
Dastoor, Ashu 761
Datta, R.K. 2530
Dauget, J.-M. 2783
D'Avanzo, Charlene 959
Davidson, Keith 2676
Davies, A.M. 2486
Davies, I.M. 2361, 3202, 3205
Davies, P.A. 1240, 2487
Davies, T. 1255
Davis, A.S. 377
Davis, R.A. Jr. 1368
Davis, R.E. 636
Davison, W. 1345, 2560
Dawson, J.B. 172
Dawson, P.B. 2645
Dawson, S.M. 1097
Dawson, T.W. 706, 707, 2463
Day, R.W. 403
Dayan, Tamar 2106
Dayan, U. 769
Dayton, P.K. 2714
Dearborn, J.H. 472
de Baar, H.J.W. 1954
Debenay, J.-P. 523
de Boer, Jacob 2316
De Broyer, Claude 510
DeBuyl, M. 1565
de Carlo, E.H. 2604
De Carlo, E.H. 2996, 3053, 3140
Decleir, Walter 2839
DeCotiis, A.G. 2857
de Cuevas, B.A. 2402
De Decker, A.H.B. 3184
Dees, J.L. 908
Defant, M.J. 378
de Heering, Ph. 708
Deigaard, Rolf 1799
Deines, K.L. 1143
de Lange, G.J 2074
de Lange, G.J. 2014, 2057, 2067
Delcroix, Thierry 2976
de Leeuw, J.W. 2968
Delille, D. 2724, 3175
DeLong, E.F. 500
De Maio, Arturo 1910
DeMaster, D.J. 218, 266, 2988, 2997
Dembek, S.R. 743
Demer, D.A. 1748
Demin, Yu.L. 1769
Demina, L.L. 1665, 2186
Demirpolat, Suleyman 1389
DeMott, W.R. 2276, 2277
de Moustier, C. 87
Denbigh, Philip 88
De Nicola, Marina 2332
Denisov, V.I. 2059
Denne, R.A. 524
Dennett, M.R. 989
Depledge, M.H. 914
Déqué, M. 2953
Derbyshire, E. 3069
Derkachev, A.N. 303
Dertouzos, M.L. 2344
de Ruijter, W.P.M. 790
Desai, D.S. 2545
Desbruyères, Daniel 2602
Des Marais, D.J. 167
Dessler, A.J. 1757
Dessureault, J.-G. 1146
deSzoeke, R.A. 631
Determann, Jürgen 78, 2922
Dethier, M.N. 530
Deuser, W.G. 212
De Vantier, L.M. 2241
DeVantier, L.M. 2709
Déverchère, Jacques 1518
de Vernal, A. 2091
Devey, C.W. 2631
Devi, K.S. 2569
Dewan, E.M. 1194
de Weerdt, W.H. 432
Dewey, R.K. 667
Dexter, S.C. 485
Dhar, A.K. 2431
D'Hieres, G.C. 2410
Diaz, D.D. 354
Diaz, G. 1351
Diaz, H.F. 2491
Díaz, J.I. 244
Dickey, J.O. 1122
Dickey, T.D. 1714, 2936
Dickie, L.M. 2199
Dickinson, W.R. 352
Dickman, S.R. 1169
Dickson, J.A.D. 2058
Didelle, H. 2410
Dieckmann, Gerhard 2674
Diester-Haass, Liselotte 2087
Dieterle, D.A. 1328
Digerfeldt, Gunnar 3251
Di Geronimo, Italo 1443
Dikinov, Kh.Zh. 1911
Ding, Liangmo 2509
Dingwall, Ken 2001
Dittmann, Sabine 464
DiTullio, G.R. 2210
Divakar, S. 64
Divakar Naidu, P. 2088
Dixon, A.G. 2586
Dixon, J.E. 379, 2142
Dixon, K. 2425
Dixon, T.H. 353, 1081
Djenidi, S. 2666
Do, Quyng Ngoc 2029
Dodd, Nicholas 1173
Dodge, P.P. 1292
Doglioni, C. 882
Dolan, J.R. 928, 2677
Dolan, Robert 252
Domack, E.W. 2089
Donard, O.F.X. 3213
Dong, Henglin 186
Donnelly, T.W. 310
Donner, G. 2725
Dore, John 3011
Dorgham, M.M. 2678
Dorofeyeva, V.A. 872
Dortch, Quay 915
Döscher, Ralf 1768
Dosso, Laure 3100
Dougherty, M.E. 2587
Dow, W.G. 2189
Dowsett, H.J. 2086, 2090
Doyle, J.D. 1922
Dozorov, T.A. 404
Drahos, H.F. Jr. 2492
Drazin, Philip 2886, 3259
Drewry, D.J. 700
Drinkwater, M.R. 2457
Drits, A.V. 2278
Dritschel, D.G. 2485
Droga, A.N. 82
Drosdowsky, L. 156
Droser, M.L. 1444
Droxler, A.W. 2052
Druilhet, Aimé 1916
Duarte, A.C. 1989
Dubinina, G.A. 1665
Duce, R.A. 2510
Duchêne, Christine 9
Ducrotoy, J.-P. 1074
Duedall, I.W. 1075
Duffield, D.A. 2236
Duggins, D.O. 1635
Duhamel, G. 445
Dullo, W.-C. 243, 1374
Dumbauld, B.R. 474
Dunayev, N.N. 1423
Duncombe Rae, C.M. 679
Dundas, Ian 949
Dunn, D.A. 1401
Dunn, J.W. 1282
Dunsworth, S.M. 1556
du Plessis, A. 403
Duplessy, J.-C. 1424
du Preez, D.R. 1588
Dupuy, C. 1503
Dupuy, Claude 405
Durasova, N.A. 872
Duringer, Philipp 1381
Dutta, P. 1570
Dutton, E.G. 1254
Dvoryaninov, G.S. 119
Dworetzky, B.A. 2099
Dwyer, R.F. 89
Dymond, Jack 3034
Dziewonski, A.M. 420, 2156
Dziewonski, Adam 2862
Dzyuba, V.P. 98

Earle, M.D. 1191
Ebbing, J.H.J. 427
Ebenhöh, Wolfgang 2280
Ebuchi, Naoto 72
Eckardt, C.B. 2053
Eckman, J.E. 1635, 2805
Ecological Society of America, 602
Edelman, S.H. 362
Edelstein, W.A. 1202
Edge, R.J. 1819
Edmond, J.M. 831, 3061
Edmunds, P.J. 2784
Edwards, Caroline 380
Edwards, K.J. 2107
Edwards, L.E. 2091
Edwards, R.N. 1388
Efimov, A.V. 1855, 1856
Efron, Bradley 575
Egan, M.S. 2001
Eggersdorfer, Birgit 538
Eglinton, G. 2386
Eguchi, T. 2149
Ehrenberg, S.N. 3051
Ehrlich, P.R. 1121
Eiceman, G.A. 170
Eichelberger, J.C. 1497
Eichenlaub, C.M. Jr. 238
Eicken, H. 1845
Eicken, Hajo 2923
Eidelman, Amir 2627
Einarsson, Páll 1519
Eisma, Doeke 3056
Eissen, J.-P. 3115
Ekdale, Tony 1446
Eldholm, Olav 1547
Eldridge, C.S. 2155
Elganainy, M.A. 59
Elgar, Steve 2914
Elizarov, A.A. 580
Elkins, J.W. 1962
Elliott, A.J. 4, 10, 624, 3242, 3246
Ellis, J.O. 2853
Elmgren, Ragnar 980
Elsgaard, L. 2726
El-Shaarawi, A.H. 1052
Elsner, J.B. 735, 1905
Eltayeb, I.A. 1520
Elthon, Don 2641
Elvehøy, I.L.A. 2727
Embley, R.W. 873
Emeis, K.-C. 2092
Emerson, S.R. 2579
Emery, W.J. 2924
Emiliani, Cesare 1744, 2881
Emlet, R.B. 1579
Endean, R. 2241, 2709
Endo, Kazuyoshi 2105
Engell-Sørensen, Lisbeth 883, 884
Engeln, J.F. 348
England, Philip 1481
Ennis, G. 2002
Enting, I.G. 1295
Epp, Helmut 3227
Epstein, M.S. 2973
Erba, Elisabetta 2054
Erel, Yigal 187
Erez, Jonathan 1014
Ergin, M. 1352
Erickson, D.J. III 766
Eriksen, C.C. 699
Erlandsson, B. 1029
Erlingsson, Ulf 269
Erm, L.P. 1241
Ernst, W. 2317
Escritor, Florence 1679
Espey, Q.I. 1972
Esquivel, D.M.S. 495
Estevez, Raul 416
Etheridge, M.A. 2136
Evans, D.A. 3039
Evans, D.V. 705
Evans, J.C. 141
Evans, R.H. 2395
Evans, R.L. 2642
Evans, S.M. 1032
Everett, R.A. 1636
Everingham, I.B. 2157
Eversberg, Ulf 173
Everson, Inigo 2873
Exon, N.F. 3231

Faas, A.V. 2010
Fabry, V.J. 212
Fader, G.B.J. 2055
Faetti, Sandro 2430
Faganeli, J. 1390, 1400
Fagerstrom, J.A. 970
Fairall, C.W. 1899
Fairhead, J.D. 2178
Falavigna da Rocha, C.E. 3185
Faleide, J.I. 1521
Falkingham, J.C. 2925
Falkner, K.K. 2998
Falkowski, P.G. 437

Faller, Jörn 1033
Falvey, D.A. 1564
Fan, Shiqing 397
Fang, Guohong 2418, 2909
Fang, Jinqi 3070
Fanneløp, T.K. 1076
Fanos, A.M. 59
Fantini, Maurizio 1273
Farber-Lorda, Jaime 1675
Farina, M. 495
Farmer, A.M. 1020
Farmer, D.M. 709
Farrell, J.W. 1425
Farrington, J.W. 321
Fashchuk, D.Ya. 1963
Faugères, J.C. 311
Fauris, Christine 547
Fawcett, J.A. 710
Fedorchuk, A.V. 1506
Feely, R.A. 188, 2999, 3000
Fehler, M.C. 2008
Feldstein, F.I. 1190
Fell, P.E. 2243
Fenner, D.P. 971
Fenster, M.S. 252
Fent, Karl 3243
Fenton, G.E. 3186
Ferguson, W.W. 3180
Ferla, C.M. 90
Fernández, C. 2307
Fernandez, Emilio 2211
Fernandez, J.A. 791
Fernandez, L.S. 2132
Fernando, H.J.S. 2413, 2944
Ferraes, S.G. 3116
Ferrari, G.M. 1212, 1589
Ferraro, S.P. 2318
Ferreira, A. 546
Ferrier, Christine 1590
Ferris, J.M. 929
Fichez, R. 1637
Fichez, Renaud 1346
Field, J.G. 1604, 1605
Field, M.E. 2015, 2018, 2073
Fielding, P.J. 438
Fieux, Michèle 2906
Figueiras, F.G. 2679
Filadelfo, Ronald 654
Fileman, C.F. 229
Filippov, I.A. 1876
Filloux, J.H. 1909, 2461
Fine, J.C. 1079
Fine, R.A. 647, 1137
Finenko, Z.Z. 447
Fingas, M.F. 2357
Finkel, C.F. 2636
Fischer, G. 3001
Fischer, J.C. 189
Fischer, K.M. 885, 886
Fischer, R.C. 2584
Fisher, A.T. 1473
Fisher, D.C. 1086
Fisher, M.A. 2123
Fisher, N.S. 548, 1347, 1978
Fisher, W.L. 2874
Fiske, R.S. 376, 3110
Fissel, D.B. 1846
Fitton, J.G. 1498
Fitz, H.C. 2806
Fitzgerald, W.F. 1992
Fitzpatrick, C. 1817
Fitzwater, S.E. 2218
Fleer, A.P. 2977, 3002
Flegal, A.R. 224
Fleisher, M.Q. 3003
Fleitout, L. 2115
Fleitout, Luce 2133
Flemming, B.W. 192
Fleury, M. 1227
Flint, M.V. 2279
Flocchini, Giuseppe 1850
Flores, R.M. 250
Florou, H. 1318
Flos, J. 1334
Flossmann, A.I. 161
Flóvenz, O.G. 1522
Floyd, P.A. 381
Flynn, K.J. 2676
Foale, S. 685
Fogarty, M.J. 1098
Fogg, G.E. 431, 439
Fomin, L.M. 76
Fontaine, Annemie 2839
Fontaine, J. 1811
Fontugne, Michel 2081
Foote, K.G. 91, 1218
Forbes, D.L. 253, 2056
Forde, E.B. 3064
Foreman, M.G.G. 1147
Forman, S.L. 2002
Forsyth, D.W. 351
Forte, A.M. 2156
Fortuño, J.-M. 945
Fosså, J.H. 506
Foster, D.R. 2341
Foster, J.M. 1676
Foster, M.R. 1242
Foucher, J.-P. 1474
Fouquart, Y. 2967
Fourcade, Serge 2077
Fourniguet, J. 2124
Fowler, M.G. 2189
Fowler, S.W. 1978, 3248
Fox, L.E. 2979
Fox-Rabinovitz, M.S. 1053
Fradkin, L.J. 711
Franceschetti, Giorgio 1174
Francine, Jon 712
Francis, O. 1170
Franck, H. 15
Franckx, Erik 2880
Francois, R.E. 1219
Francois, Roger 196
Frankel, E.G. 2353
Frankignoul, Claude 9
Franklin, B.J. 353
Franklin, Deborah 2371
Fraser, R.S. 134
Fraser, W.R. 459
Fréchette, Marcel 502
Frederick, James 138
Fredsøe, Jørgen 1799
Freeland, H.J. 1147
Freidman, G.I. 1190
Freilich, M.H. 1058
Frey, F.A. 874, 2381
Frey, Herbert 1456
Friedrich, H.J. 16
Frignani, Mauro 270
Frihy, O.E. 823, 2020
Friis-Christensen, E. 1906
Frink, C.R. 2570
Frisbie, P.R. 2532
Fritz, S.C. 836
Froidefond, J.-M. 668
Frost, B.W. 2209
Frouin, Robert 127
Fry, Brian 2212
Fry, V.A. 801
Frye, D.E. 1054, 1715
Fryer, G.J. 2181
Fu, Congbin 5
Fu, L.-L. 1070
Fujii, Yoichiro 3085
Fujinawa, Y. 2149
Fujita, Toshihiko 465
Fukami, K. 2264
Fukuda, Yoichi 80
Fukui, Takako 1457
Fürderer, Heike 3027
Furnari, G. 529
Furness, R.W. 1580
Furton, K.G. 3017
Furusawa, Masahiko 92
Gable, C.W. 887
Gabrielson, T.B. 2464
Gadel, François 1966
Gaedke, Ursula 2280
Gaetani, Maurizio 861
Gaffney, D. 129
Gage, K.S. 2962
Gagnon, J.-M. 2244
Gagnon, J.-M.. 2246
Gaherty, J.B. 1523
Gaillard, Christian 1447
Gaines, A.G. Jr. 1113
Gaines, S.D. 3146
Galgani, F. 2841
Galgani, François 1950
Galil, B.S. 2667, 3180
Galkin, S.V. 469
Gallagher, W.B. 1448
Gallée, H. 130
Gallimore, R.G. 132
Galloway, A. 434
Galloway, W.E. 1426
Galvin, Cyril 25
Gamai, I.H. 823
Gangi, A.F. 3094
Gao, Xingmei 177
Garabétian, Frédéric 198, 2728
Garbary, D.J. 2304
Garcia, C.A.E. 2213
Garcia-Esquivel, Zaúl 981
Garcia-Romero, Bernardo 3221
Gardenghi, G. 3038
Gardner, J.V. 2018
Gardner, M.J. 165
Gardner, Mike 2561
Gardner, W.S. 210, 219, 1305
Gardner-Taggart, J.M. 687
Garrison, D.L. 2214
Garrison, G.R. 1219
Garside, Chris 3154
Garwin, Laura 613
Garzanti, Eduardo 861
Gasca, R. 2785
Gasperini, M. 429
Gasse, F. 2093
Gat, J.R. 2566
Gattuso, J.-P. 3166
Gaudry, A. 1940
Gaudy, R. 1034
Gaulier, J.-M. 2122
Gauthier, Michel 304
Gawarkiewicz, Glen 1165
Gaynanov, A.G. 335
Gehrels, G.E. 352
Geiser, Ken 1087
Geissman, J.W. 854
Geist, E.L. 2123
Gelati, R. 312
Geller, J.B. 972
Genrich, J.F. 3083, 3238
Gent, P.R. 1798
Geodekyan, A.A. 423
Georgakopoulos-Gregoriades, E. 549
George, Jacob 2465
Geraci, J.R. 960
Gerasimenko, S.A. 1857
Gerdes, G. 2764
Gerdes, Rüdiger 637, 1772
Gerlach, S.A. 577
Gerlach, T.M. 3101
Germain, P. 1704
German, C.R. 2565, 3061
Gerring, P. 3174
Gerringa, L.J.A. 792, 793
Gerstengarbe, F.-W. 1252
Gervasio, L. 120
Geyer, W.R. 2
Ghil, Michael 1231
Ghiorso, M.S. 1416
Ghosh, A.K. 2659
Ghosh, S.K. 2449
Giani, Alessandra 930
Giardini, D. 234
Gibbons, M.J. 1000, 1005
Gibbs, C.F. 440
Gibbs, P.E. 3206, 3215
Giberson, W.E. 1071
Gibson, C.H. 725, 2476, 2488
Gibson, S.A. 2655
Gibson, T.G. 2614
Giesenhagen, H.C. 2729
Gilbert, K.E. 2473
Gilbert, N.S. 539, 2309
Gili, J.-M 1642
Gili, J.M. 1643, 2222
Gili, J.-M. 2266, 2789
Gilinsky, N.L. 2338
Gillis, A.M. 573
Gilmartin, Malvern 2983
Gindler, I.V. 1858
Ginis, I. 1913
Ginis, I.D. 1911
Ginster, Ursula 2988
Giorgi, Filippo 739
Gipson, Mack Jr. 1477
Girdler, R.W. 3086
Gitel'son, A.A. 1124
Gladenkov, A.Yu. 1427, 1506
Gladkov, N.G. 1507
Glaus, H. 2730
Glazner, A.F. 856
Gleitz, M. 2680
Glendening, J.W. 1928
Glibert, P.M. 2571
Gliddon, C.J. 1581
Gloersen, Per 79
Glotov, V.P. 1859
Glynn, P.W. 432, 994
Gnevyshev, V.G. 1891
Goad, L.J. 3215
Gochfeld, D.J. 919
Gocke, K. 2731
Gocke, Klaus 2763, 3176
Godfrey, J.S. 1800, 2954
Godin, Gabriel 42, 681
Godin, O.A. 1860
Goede, A.A. 2319
Goenaga, Carlos 1379
Goeyens, Leo 2681
Goff, J.A. 813, 3045
Gohda, Shiro 1314
Gohin, Francis 3
Gokhale, K.S. 544
Goland, V.I. 1861
Goldberg, E.D. 1342, 2376
Golden, Frederic 1756
Goldman, J.C. 989
Goldstein, S.J. 3102
Golubev, V.N. 1862
Golubev, Vladimir 3060
Gomez, Basil 821
Gomez, E.D. 2879
Gomez-Reyes, Eugenio 654
Gonzalez, C. 1351
González, Humberto 2320
Good, I.J. 2338
Goodacre, Alan 2887
Gooday, A.J. 1015
Gooday, G.W. 1667
Goodfriend, G.A. 2615
Goodman, Dean 1524
Goodrum, Geoffrey 2857
Gopinathan, C.K. 1274
Gordeyev, V.V. 185
Gordon, A.H. 131
Gordon, A.L. 638
Gordon, D.C. 1031
Gordon, G.E. 1945
Gordon, H.R. 1257
Gordon, H.S. 597
Gordon, J.D.M. 1628
Gordon, R.G. 853, 854, 867, 2121

Gordon, R.L. 2903
Gordon, R.M. 2218
Gorham, Eville 2374
Goring, D.G. 2915
Gorny, M. 999, 2807
Gorsky, G. 1591
Gorsky, Gabriel 1347
Goryainov, I.M. 1391
Goryanov, I.N. 1571
Goschen, W.S. 753
Goss, Catherine 2873
Goss-Custard, J.D. 978
Goswami, B.N. 1275
Gow, A.J. 1207
Goy, Jacqueline 2786
Graber, H.C. 688
Grad, M. 1525
Gradinger, R.R. 2682
Gradinger, Rolf 441
Graham, D.K. 2070
Graham, David 3101
Granby, K. 2321
Grand, S.P. 902
Granéli, Edna 1601
Grant, Jonathan 502, 2245
Grant, T.R. 558
Gras, J.L. 1943
Grasso, M. 3038
Grasso, Mario 3112
Gray, J.S. 2365
Gray, John 3253
Greatbatch, R.J. 1773, 2902
Green, C.A. 2006
Green, W.V. 2643
Greene, Gary 1484
Greene, H.G. 1526
Greengrove, C.L. 625
Gregersen, S. 1513
Gregg, M.C. 107, 1228, 1232
Gregson, P.J. 2157
Greischar, Lawrence 2411
Grémare, A. 973
Grenfell, T.C. 1203
Griboulard, R. 1392
Grieve, R.A.F. 2195
Griffiths, Colin 1797
Griffiths, R.W. 1158, 2158
Grimalt, J.O. 550
Grimshaw, R. 1166
Grimshaw, R.H.J. 124
Grimshaw, Roger 689
Grishin, G.A. 1148
Gritsenko, I.V. 1875
Gritsenko, V.A. 1875
Grizzle, R.E. 1638
Grody, N.C. 2497
Grönlund, Lars 931
Grosch, C.E. 2477
Gross, M.F. 531
Grossmann, S. 2732
Grossmann, Sönnke 2733
Grosul, A.B. 1152
Groves, J.E. 2926, 2935
Grumbine, R.W. 2907
Gründlingh, M.L. 2858
Grunow, A.M. 2134
Gruszczyński, Michal 220
Gu, Zhihao 1824
Gubbins, D. 406
Güde, H. 2734
Güde, Hans 942
Gudmundsson, Olafur 235
Guérin, J.-P. 1034
Guillard, R.R.L. 548
Guillén, Jorge 244
Guillou, Jacques 3181
Guiss, Claudia 987
Gundersen, J.K. 2567
Gunkel, W. 2722
Gunn, A.M. 165
Gunn, Joel 2950
Gunnarsson, Karl 1522
Guo, Zhongxin 5
Gupta, G.R. 2545
Gupta, S.M. 327
Guptasarma, D. 1482
Gurenko, A.A. 2143
Gurina, N.V. 2071
Gust, D.A. 1495
Gutel'makher, B.L. 2279
Guterch, A. 1525
Gutierrez, E. 1334
Gutt, Julian 2807
Guymer, T.H. 752
Guza, R.T. 60, 1177
Guzmán, H.M. 1035

Haagmans, R.H.N. 1468
Haarsma, R.J. 1243
Haddad, K.D. 1630
Haddad, R.I. 167
Häder, D.-P. 538, 2836
Haebler, Romona 1040
Haedrich, R.L. 948, 2244, 2246, 2251
Hagelberg, T. 2382
Hagen, E. 2955
Hagen, W. 2670
Hagstrum, J.T. 862
Hähnel, Michael 1149
Haidvogel, D.B. 669
Haig, Janet 1677
Haigh, R. 1592
Håkanson, Lars 1729
Hall, C.A.S. 2345
Hall, C.D. 732
Hall, J.D. 712
Hall, L.A. 802
Hall, M.M. 26
Hall, S.J. 2200
Hall, Stuart 338
Hallam, A. 1422
Hallberg, R.O. 3244
Hällfors, Guy 932
Halliday, A.N. 841
Hallock, Z.R. 2399
Hallowell, Christopher 619
Hamaguchi, Hiroyuki 2159
Hamamoto, Tetsuo 2735
Hamann, I.M. 670
Hameed, Sultan 2521, 2525
Hamelin, Bruno 3071
Hamilton, D.P. 2372
Hamilton, J.M. 1155
Hamilton, T.F. 1701
Hamlin, C.C. 3245
Hammack, Joe 695
Hammond, L.S. 968
Hammond, S. 3233
Hamon, B.V. 744
Hampton, Ian 88
Han, S.-K. 2403
Han, Wuying 199
Hanawa, Kimio 128, 1901
Handa, Nobuhiko 1327, 1967
Haney, J.C. 1650
Hanisak, M.D. 1689
Hanks, T.C. 2644
Hansen, L.S. 2257
Hansen, P.J. 933
Hansgen, K.H. 588
Hanslow, D.J. 1185
Hanson, D.W. 2387
Hansteen, T.H. 382
Hanuš, V. 888
Hara, Shigemitsu 1653
Hara, Tetsu 1175
Harada, Koh 1332
Harbert, W.P. 862
Harbison, G.R. 2787
Hardarson, B.S. 1498
Hareesh Kumar, P.V. 736
Hargreaves, P.M. 2808
Harkantra, S.N. 2716
Harland, R. 2070
Harlow, C. 2084
Harms, J. 551
Harper, T.R. 2160
Harris, J.R.W. 3245
Harris, P.T. 817
Harris, R.A. 2645
Harrison, W.G. 207, 2696, 3004, 3011
Hart, C.W. Jr. 516
Hart, J.E. 728, 1236
Hart, S.R. 1548
Hartmann, Gerd 3187
Harvey, A.W. 1677
Harvey, H.R. 2568
Hasegawa, Akira 422, 889
Haslam, I. 229
Hasse, Lutz 1253
Hasselmann, Dieter 1176
Hasselmann, Klaus 1262
Hastenrath, Stefan 2411
Hatcher, B.G. 1634
Hatcher, R.D. Jr. 3095
Haugen, J.-E. 282
Hauksson, Egill 890
Havens, K.E. 1036
Havskov, J. 2632
Hawkesworth, Chris 411
Hawkins, J.P. 3207
Hawkins, S.J. 2717
Haxby, W.F. 2625
Hay, A.E. 1863
Hay, M.E. 2201
Hayashi, Masahiko 1300
Hayashida, Akira 1457
Haydock, Irwin 471
Hayes, D.E. 1488
Hayes, D.F. 2352
Hayes, J.W. 799
Hayling, K.L. 336
Haymon, R.M. 1410, 2633
Haynes, R. 639
Hayt, D.W. 1125
Hayward, T.L. 934
He, Lijuan 3077
He, Youhai 2956
Head, E.J.H. 3004
Heaney, K.D. 2466
Heaney, S.I. 1697
Heard, R.W. 1680, 1685, 2283
Heath, M.R. 614
Heath, Mike 962
Hecht, Christian 243
Heck, K.L. Jr. 3173
Hecker, Barbara 3060
Heckman, C.W. 3208
Hedges, J.I. 3005
Hedqvist-Johnson, Karin 2247
Hedrick, M.C. 2236
Hedström, K.S. 669
Heerkloss, R. 3155
Hegg, D.A. 162, 1299, 1927
Hegge, B.J. 254
Hegseth, E.N. 1023
Heileman, L.I. 442
Heinänen, Anne 2258
Heinloo, J. 1958
Heinze, C. 1263
Heip, Carlo 2268, 2713
Heise, S. 2736
Heldal, Mikal 489
Helder, Willem 1339
Helffrich, George 1527
Helfrich, K.R. 2478
Helle, Eero 1626
Hellmer, H.H. 2458
Helmke, E. 2779
Hemond, H.F. 1326
Hempel, Gotthilf 3235
Henderson, E.W. 614
Henderson-Sellers, A. 603
Henderson-Sellers, B. 745
Hendon, H.H. 2522
Hénin, Christian 2976
Henneke, Else 2057
Henrichs, S.M. 2980
Henrichs, Susan 3015
Henrici, G. 154
Henriet, J.P. 409
Henry, Pierre 286, 2603
Henyey, F.S. 93
Heppenheimer, T.A. 604
Héquette, Arnaud 255
Herak, M. 407
Herbers, T.H.C. 1177
Herbert, T.D. 313
Herbich, J.B. 2025
Herguera, J.C. 2094, 2608
Herman, D.C. 552
Hermansson, Malte 3044
Hermelin, J.O.R. 328, 847
Herndl, G.J. 2702, 2703
Herrington, P.M. 2058
Herrmann, F.A. Jr. 583
Hesany, Vahid 1
Hesse, Bruno 1690
Hettema, Marc 1535
Heubeck, Christoph 363
Hewitt, R.P. 1748
Hey, R.N. 2132
Heywood, K.J. 443
Hickey, B.M. 1127
Hickman, G.D. 713
Hicks, G.R.F. 479
Hide, Raymond 1122
Hieke Merlin, O. 1393
Hignett, P. 150
Hilbig, Brigitte 2265
Hildebrand, A.R. 1428
Hildebrand, J.A. 1517
Hilgen, F.J. 843, 1429
Hill, A.E. 1593
Hill, P.J. 3099
Hill, P.R. 2033
Hill, R.I. 1528
Hillis, R.R. 283
Hinckley, D.A. 2585
Hine, A.C. 314
Hinga, K.R. 2511
Hinnov, L. 833
Hinton, J.C. 1306
Hinz, K. 2765
Hinze, W.J. 337
Hirakawa, Kazumasa 1594
Hirasawa, Tomowo 2162
Hirata, Naoshi 402
Hirata, Tetsu 974
Hirche, H.-J. 2809
Hirschberg, S. 1076
Ho, J.-S. 2293
Hobbs, P.V. 1927
Hobson, K.A. 1651
Hockey, P.A.R. 977
Hockley, D.E. 803
Hodell, D.A. 837, 2095
Hodgkinson, R.L. 1449
Hodkinson, R.A. 3062, 3139, 3141
Hodson, R.E. 1970, 2308
Hoeksema, B.W. 503, 1639
Hoepffner, Nicolas 444
Hoernle, Kaj 3117
Hoffman, Antoni 220
Hoffman, K.A. 2621
Hoffmann, Roald 1117
Hofmann, E.E. 640
Hofstraat, J.W. 174
Højerslev, N.K. 1258

Holik, J.S. 383
Holland, G.J. 1291
Holland, S.M. 2610
Holland, W.R. 141
Hollander, D.J. 1430
Hollerbach, Rainer 114
Hollibaugh, J.T. 1974
Holloway, Marguerite 1727
Holloway, S. 284
Holman, R.A. 2433
Holme, S.J. 252
Holmer, Marianne 493
Holm-Hansen, O. 1214
Holm-Hansen, Osmund 1595, 1603
Holthuijsen, L.H. 2432
Holton, J.R. 1926
Honda, Satoru 1529
Honeyman, B.D. 3006
Hong, S.K. 298
Honkura, Y. 1458
Honkura, Yoshimori 1552
Honorez, José 891
Hood, P. 343
Hood, R.R. 935
Hoogweg, Peter 1074
Hopcroft, R.R. 1686
Hopkins, T.L. 2692
Hopkinson, C.S. Jr. 975
Höpner, Thomas 3147
Hoppe, H.-G. 2729, 2742, 2763
Hoppensteadt, F. 2737
Horikoshi, Koki 2735
Horiuchi, Shigeki 422
Horne, E.P.W. 1804
Hornung, Hava 1037
Horrell, M.A. 3072
Hosie, G.W. 511
Hosom, D.S. 733
Hough, A.R. 2281
Houghton, D.D. 132
Houghton, John 2966
Houghton, R.W. 626
Houghton, S.D. 540, 1693
Houze, R.A. Jr. 1897
Hovan, S.A. 838
Hovland, Martin 3133
Howa, H.L. 1367
Howarth, R.W. 1976
Howd, P.A. 2433
Howell, B.F. Jr. 1742
Hsieh, W.W. 744
Hsueh, P.-W. 2810
Hu, J.-H. 1132
Hua, B.L. 8
Huang, C.-Y. 762, 763, 3087
Huang, R.X. 11, 641
Huang, Shuilong 2564
Huang, W.G. 36
Huber, G. 3177
Hubold, G. 2670
Hudnik, V. 559
Hudson, J.G. 2532
Hudspeth, R.T. 1178
Huested, S.S. 2579
Huggett, R.J. 3039
Hughes, B.A. 2927
Hughes, G.W. 3088
Hughes, J.M. 1041
Hughes, M.N. 490
Hughes, R.G. 1642, 2797
Hughes, R.N. 1581
Hulme, Mike 1907, 1931
Hulsemann, Kuni 2282
Humes, A.G. 2811
Hummon, J. 1811
Huneycutt, B.L. 1055
Hunt, J.C.R. 726, 1246
Hunter, K.A. 3007
Huntley, M. 1684
Huntley, M.E. 433
Huntley, Mark 1576, 1678, 1679
Huntress, W.T. 2863
Hurd, D.C. 3008
Hurford, N. 2358
Hurlbert, S.H. 1012, 1013
Hurlbut, C.J. 976, 1670
Hurrell, J.W. 2528
Husebye, E.S. 1513, 1537, 1546
Hussey, W.J. 2852
Huyer, Adriana 655, 656, 674, 935
Hwang, P.A. 1877
Hynes, Andrew 1459

Iacobellis, S.F. II 1919, 1920
Ibanez, F. 445
Ibenbrahim, Aomar 2651
ICES 2868
Ichikawa, Hiroshi 43
Idso, S.B. 133
Ierley, G.R. 1801
IFREMER, 572
Iijima, Azuma 2096
Ikeda, Sumiko 315
Ikeda, Tsutomu 1594
Ikeya, Motoji 315
Il'ichev, V.I. 98, 1864
Iliffe, J.E. 1565
Iliffe, T.M. 2802
Il'in, A.V. 2161
Illangasekare, T.H. 2932
Illenberger, W.K. 753
Imai, Goro 607
Inahata, Norifumi 1886
Ingel, L.Kh. 1892
Ingram, R.G. 1198, 2460
Inniss, W.E. 552
Inoue, Toshiro 139
Inouye, L.S. 1038
International Whaling Commission 1099
Iriarte, Arantza 1596
Iriarte, J.L. 541
Irish, J.D. 1150
Irlandi, E.A. 1021
Isaacson, Michael 1825
Isacks, B.L. 401
Isemer, H.-J. 1253
Ishida, Y. 2264
Ishikawa, Naoto 1460
Ishimaru, Takashi 455
Ishizuka, Hideo 384
Ishizuka, Toshio 1384
Iskandarani, Mohamed 2434, 2435
Islam, Shahnaz 1326
Ismail, N.S. 3167
Italiano, F. 385
Ittekkot, Venugopalan 2575
Ivanov, L.M. 1894
Ivanov, M.K. 245
Ivanov, M.V. 1323
Ivanov, V.V. 1826, 1893
Ivanova, N.M. 1530
Ivins, E.R. 353
Iwama, G.K. 1712
Iwasaka, Naoto 1901
Iwasaka, Yasunobu 1300
Iwasaki, N. 3188
Iyer, H.M. 2645
Iyer, S.D. 426, 1402, 1570
Izaguirre-Fierro, Gildardo 1043
Izbicki, J.-L. 2467
Izett, G.A. 2609
Izquierdo-Vicuña, F.B. 1659
Izquierdo Vicuña, F.B. 2324
Izutani, Yasuo 2162

Jackson, D.D. 3118
Jackson, J.B.C. 1035
Jackson, James 865
Jackson, L.F. 2812
Jackson, L.L. 175
Jackson, S.M. 2827
Jackson, T.L. 2477
Jackson, W.P.U. 3230
Jacob, D.J. 767
Jacobowitz, Herbert 2498
Jacobs, S.S. 1136
Jacobsen, T.R. 176
Jacobson, M.J. 717
Jacobson, R.S. 2866
Jacobsson, Alvar 1039
Jacques, G. 2215
Jaffar, M. 3217
Jagers, Peter 2848
James, N.P. 1394
James, P.T. 2808
Jameson, R.J. 1048
Jandhyala, Venu 2857
Janecky, D.R. 1414
Jannane, Mohammed 3123
Janowitz, G.S. 1597
Javelaud, Olivier 819
Jaworski, G.H.M. 1697
Jay, D.A. 2436
Jayalakshmy, K.V. 2828
Jazdzewski, K. 2813
Jean-Baptiste, P. 3063
Jeanthon, C. 2738, 2776
Jébrak, Michel 304
Jedwab, Jacques 3009
Jeffries, G. 1819
Jelsma, Hielke 382
Jenkins, Adrian 2459
Jenkins, W.J. 108
Jensen, G.C. 512
Jensen, K. 1994
Jensen, L.M. 454
Jensen, M.H. 466
Jensen, T.G. 2904
Jentsch, Volker 1264, 1265
Jerling, H.L. 1006
Jespersen, J. 2387
Jessup, A.T. 2437, 2438
Jesus, S.M. 1865
Jeuniaux, Ch. 1668
Jeuniaux, Charles 1663, 1669
Jiang, Anbei 2554
Jiang, Guochang 186
Jiang, Shaoren 3089
Jillett, J.B. 3174
Jin, K.-R. 1317
Jo, C.H. 2025
Johnsen, Geir 1023
Johnson, A.S. 3171
Johnson, C.R. 1654
Johnson, D.D. 2919
Johnson, D.L. 2368
Johnson, E.R. 31, 55
Johnson, G.C. 12, 27
Johnson, H.P. 413
Johnson, Howard 3134, 3135
Johnson, L.E. 839
Johnson, R.G. 316
Johnson, R.S. 121
Joiris, C.R. 2322, 2842
Jolivet, Laurent 367
Jonas, Jason 338
Jones, A.T. 1633
Jones, B.H. 3255
Jones, Burton 720
Jones, C.A. 1758
Jones, D.S. 3073
Jones, E.B.G. 2827
Jones, E.J.W. 1499
Jones, F.W. 1472
Jones, J.D.S. 2383
Jones, Linda 1096
Jones, R.D. 200, 1307
Jones, R.L. 1749
Jonsson, Geirfinnur 1461
Joo, S.W. 690
Joos, Fortunat 794
Jordan, R.L. 1055
Jordan, R.W. 1450
Jordan, T.E. 2377
Jordan, T.H. 885, 886
Jørgensen, B.B. 2567
Jorgensen, D.P. 2523, 2524
Jorgensen, Julie 1451
Joseph, M.G. 1285
Joseph, Martin 1056
Jost, G. 2739
Jost, Günter 3178
Jou, B.J.-D. 2523
Jouanne, Virginie 346
Jouanneau, J.-M. 230
Joubert, P.N. 1241
Jourdin, F. 2426
Joyce, T.M. 631, 657, 1809, 2400
Jubril, M.A. 1395
Judge, A.V. 1489
Judge, J.T. 2030
Juillet-Leclerc, A. 2512
Jull, A.J.T. 2089
Julshamn, Kaare 1309
Jung, H.-S. 2660
Jung, K.-T. 2401
Jung, W.-Y. 2011
Jurdy, D.M. 2135
Just, Jean 3189
Justesen, Peter 1799
Juwarkar, Asha 2740

Kaczmaruk, B.Z. 3184
Kadko, D.C. 720
Kagan, B.A. 1128
Kagan, Y.Y. 3118
Kähler, P. 2741
Kähler, Paul 221
Kahma, K.K. 783
Kahru, Mati 1979
Kaiser, Wolfgang 3149
Kajihara, Naoto 1594
Kalejta, B. 977
Kalsi, S.R. 2530
Kamada, R.F. 1928
Kamata, Hirohisa 2028
Kamieth, Heino 3208
Kamphuis, J.W. 2021, 2354
Kamykowski, D. 1597
Kanamori, Hiroo 1107, 2445
Kanari, S.-I. 1878
Kanda, Jota 1598
Kandel, R.S. 2948
Kane, J.S. 2969
Kane, K.A. 1488
Kang, H.-E. 2421
Kang, J.-K. 2661
Kang, Y.Q. 2421
Kannupandi, T. 1707
Kao, Honn 3119
Kapoor, Jerry 2001
Karabashev, G.S. 1759
Karaca, Mehmet 1229
Karakassis, I. 434
Karaman, G.S. 1671
Karavayeva, Ye.V. 1955
Karl, D.M. 433, 1337, 1585, 1652, 1655, 1722, 2578, 3010, 3011
Karlin, R. 292
Karlin, R.E. 1387
Karnovskii, A.M. 1866
Karrasch, B. 2742
Karsten, Jill 2181, 3092

Karsten, Ulf 532
Kasahara, Junzo 236
Kasilingam, D.P. 1125
Kaspar, H.F. 491
Kasuga, Sigeru 340
Kasuya, Masao 315
Katao, Hiroshi 236
Katsaros, K.B. 140
Katsube, T.J. 2187
Katsura, Ikuo 2624
Kattner, Gerhard 2216
Katzfey, J. 1925
Kaufman, Y.J. 134
Kautsky, Hans 3209
Kawahata, Hodaka 1531
Kawakatsu, Hitoshi 1532
Kawamura, Hiroshi 72
Kawamura, Kimitaka 1327
Kawamura, Ryuichi 1912
Kawamura, Takeshi 754
Kawanobe, Yoshihisa 384
Kawase, Mitsuhiro 1774
Kay, W.A. 2646
Kazandjian, Luc 94, 2468
Kazanskiy, A.B. 1431
Kaz'min, V.G. 1483
Ke, Peihui 28
Keats, D.W. 2829
Kebede, Fekadu 2163
Keen, C.E. 2626, 2646
Keen, E.A. 1100
Keene, N.K. 2216
Keigwin, L.D. 321, 1432
Keil, R.G. 492
Kell, Volkbert 3162
Keller, A.A. 2511
Keller, G.H. 824
Keller, Gerta 2098
Keller, L.M. 132
Keller, W.C. 63, 2437, 2438
Kellett, R.L. 1462
Kelley, J.T. 2016
Kelling, G. 349
Kelly, K.A. 1151, 1809, 2622
Kelly, K.K. 1255
Kemp, A.D. 2798
Kempt, N.K. 182
Kendall, D.G. 2882
Kendrick, G.W. 2022
Kennedy, E. 101
Kennelly, S.J. 598
Kennett, B.L.N. 1533
Kennett, J.P. 1433
Kensley, Brian 1680, 2283
Kent, D.V. 2134
Kenya 2647
Kenyon, K.E. 1827
Keough, M.J. 2342
Kerambrun, P. 1034
Kerman, B.R. 1244
Kerr, R.A. 1750, 2384, 3260
Kerr, R.C. 1230
Kerr, S.R. 2199
Kessler, W.S. 2415
Key, J. 1204, 1847
Khachay, Yu.V. 399
Khain, A. 1913
Khain, A.P. 1911
Khain, V.V. 374
Khain, V.Ye. 1490
Khalil, M.A.K. 1941
Khangaonkar, T.P. 1179
Kharlamov, A.A. 1826
Khasanov, Sh.M. 1186
Khattak, S. 1213
Khirsagar, D.G. 2740
Khripounoff, A. 213
Khrustalev, Yu.P. 2059
Kidd, W.S.F. 2151
Kidder, D.L. 2612
Kidson, J.W. 1775
Kiene, R.P. 1982, 2259
Kieskamp, W.M. 222
Kikukawa, Hiroyuki 43
Killus, J.P. 160
Killworth, P.D. 1776, 1777, 1885
Kim, C.-K. 2479
Kim, K.H. 1411, 3053
Kim, Kuh 2422
Kim, S.I. 2442
Kim, S.-J. 2743
Kim, S.-S. 2408
Kim, Y.S. 298
Kimura, N. 391
Kimura, Nobukazu 3097
Kinder, T.H. 634, 635
Kindle, J.C. 1129
Kineke, G.C. 214
King, G.M. 2555
King, L.L. 206
Kingsford, M.J. 598
Kinoshita, Masataka 344
Kinze, C.C. 2321
Kinzie, R.A. III 1047, 2793
Kipfstuhl, Josef 2928
Kiratzi, A.A. 408
Kirby, J.T. 56
Kirby, Stephen 868
Kirchman, D.L. 492, 936, 943, 2752
Kirk, E. 144
Kirk, J.T.O. 702
Kirk, R.E. 2003
Kirkwood, Don 784
Kirkwood, G.P. 2291
Kirshtein, J.D. 1656
Kirst, G.O. 2680
Kirstein, K.-O. 2744
Kissling, Eduard 1534
Kit, Eliezer 2894
Kizer, K.W. 588
Kizu, Shoichi 128
Klaassen, G.P. 109
Klages, M. 2317
Klages, Michael 510
Klaus, Adam 2019
Klein, Birgit 678
Klein, E.M. 892
Klein, Holger 721
Kleinrock, M.C. 813, 2138
Klemme, H.D. 2657
Klenke, T. 2766
Klevannyy, K.A. 2029
Klick, Silke 225
Klinck, J.M. 1802
Klinkenberg, G. 2745
Klinkhammer, G.P. 223
Klöser, Heinz 3156
Klyausov, A.V. 1815
Klyuyev, M.S. 2191
Knauer, George 3012
Knebel, H.J. 2023
Kneib, R.T. 1627
Kniffen, S. 2391
Kniskern, F.E. 2867
Knoll, A.H. 1713
Knoop, W.T. 1587
Knowles, S.C. 1368
Ko, Peter 2472
Ko, S.H. 95
Kobayashi, Naomasa 2323
Köberle, Cornelia 637
Kochergin, I.Ye. 1828
Kodama, K.P. 855
Koeppenkastrop, D. 2604
Koeppenkastrop, Dirk 2996
Koga, Seizi 1301
Kogarko, L.N. 394
Kögeler, Jos 3252
Kohyama, Norihiko 278, 1384
Koide, Minoru 285
Koike, Isao 1653
Kojima, Shigeaki 1640
Kondrat'yev, K.Ya. 1124
König, Holger 1867
Konnov, V.A. 1953
Kononkova, N.M. 2143
Kontar, Ye.A. 1152, 1803
Konyayev, K.V. 1195
Konyukhov, A.I. 245, 423
Kooi, Henk 1535
Koresawa, Sadayuki 236
Korhonen, H. 1513
Kornicker, L.S. 513
Korsun, S.A. 1687
Korzhikova, L.I. 1981
Kosro, P.M. 671, 674
Köster, M. 2746, 2754
Kosters, E.C. 3197
Kostichkova, D.P. 1829
Kostin, V.A. 2060
Kostopoulos, D.K. 893
Kostyanoy, A.G. 1234
Koubbi, P. 445
Koutitonsky, V.G. 2024
Kovačević, Vedrana 1805
Kovachev, S.A. 2648
Kovacs, Austin 2929, 2930
Kovalev, P.D. 1276
Kovaleva, N.V. 1657
Kovbasyuk, V.V. 1276
Koyama, Masato 3110
Kozlov, S.I. 57
Kozlov, V.F. 1879
Kozlova, S.I. 1338
Kraft, L.M. Jr. 691
Krahn, M.M. 1990
Krämer, W. 2584
Krantz, D.E. 2097
Krasitskiy, V.P. 1829
Krasnov, S.G. 2076
Kraus, N.C. 29
Krause, Gunther 1917
Krause, M. 446
Krawinkler, Helmut 2644
Kreidenweis, S.M. 770
Kress, Nurit 1037
Kreyman, K.D. 1880
Kripalani, R.H. 2539
Krishnamurthy, K. 1648
Krishnamurti, T.N. 761
Kristensen, Erik 466, 493, 2248, 2981
Kristjansson, Leo 1461
Kristoffersen, Yngve 246
Kritidis, P. 1318
Kroenke, L.W. 3108
Krom, M.D. 209, 937
Kromer, Bernd 2080
Kronrod, V.A. 116
Krstulović, N. 2747, 2772
Krumbein, W.E. 2748, 2749, 2764, 2766, 2775, 2777, 2833
Krupatkina, D.K. 447
Kruse, B. 1994
Krylov, S.V. 894
Kubokawa, Atsushi 1167
Kucklick, J.R. 2585
Kudryavtsev, V.M. 1657
Kuehl, D.W. 1040
Küffer, J. 1076
Kühnel, I. 745
Kukharchik, A.V. 1894
Kuleshov, A.F. 1759
Kulhánek, Ota 2163
Kulis, D.M. 1025
Kumar, K.R. 1932
Kumar, K.V.S. 2516
Kumar, P.V.H. 1285
Kumar, S.K. 2683
Kumari, L.K. 2576
Kung, R. 2531
Künitzer, Anita 467
Künnis, K. 2750
Kunze, E. 1228
Kuo, A.Y. 201, 2352
Kuosa, Harri 938
Kuparinen, J. 1022
Kuparinen, Jorma 2258
Kuperman, W.A. 2466
Kuptsov, V.M. 305, 468
Kurbjeweit, Frank 514
Kureishy, T.W. 1702
Kuril'chikova, G.Ye. 1315
Kurup, P.G. 2441
Kusakabe, Masashi 1319
Kushiro, Ikuo 1495
Kusky, T.M. 317
Kussakin, O.G. 1007
Kusuma, G.R. 1921
Kusznir, N.J. 2178
Kutty, M.K. 2828
Kuvaas, Berit 246
Kuz'kin, V.M. 1868
Kuz'min, P.N. 2165
Kuznetsov, A.P. 1703
Kylstra, Niels 342
Kyte, F.T. 324
Laane, R.W.P.M. 3213
Ladd, Lew 2388
La Ferla, R. 2260
Lago, Bernard 881
Lahr, J.C. 1534
Lal, D. 2480
Lallemant, Siegfried 286
Lamb, H.F. 3046
Lambeck, Kurt 864
Lana, P.da C. 987
Lancraft, T.M. 961
Landing, W.M. 3013, 3014
Landry, M.R. 1606
Landuzzi, Vladimiro 2072
Lane, P.V.Z. 1011
Langhorst, M.L. 170
Langlois, Gilbert 3
Langner, J. 2548
Langone, Leonardo 270
Langston, C.A. 408, 814
Langston, W.J. 3210
La Noce, T. 1956
Lapin, I.A. 1968
Lapointe, B.E. 1691
Lardner, R.W. 680
Large, W.G. 141
Largier, J.L. 1778
Laroche, Nanci 2357
Larsen, J.C. 1153
Larson, K.M. 1358, 1359
Larson, Magnus 29
Larson, R.J. 2787
Larson, R.L. 1536
Larsson, F.R. 1537
Larter, R.D. 409, 2628
Larue, D.K. 909
Lasker, H.R. 504
Lassen, K. 1906
Last, David 1161
Lastochkin, A.N. 2017
Latypov, Y.Y. 2794
Lauffenburger, D.A. 2737
Launiainen, Jouko 1917
Lauritson, Levin 2859
Lavelle, J.W. 1130
Lavery, P.S. 533
La Violette, P.E. 14
Law, C.S. 494
Law, L.K. 1388
Law, R.J. 229, 2586
Lawrance, L.M. 557
Lawrence, M.B. 764
Laws, E.A. 2210
Lay, Thorne 901, 902, 1523

Lazure, Pascal 13
Lea, D.W. 2616
Leach, H. 2898
Learned, John 1063
Leatherman, S.P. 251
Le Bas, M.J. 1500
LeBlanc, L.R. 2469
LeBlond, P.H. 1641
Lebo, M.E. 2577
Lebon, G.T. 2999
Le Cann, B. 1160
Lecroy, S.E. 1676
Lécuyer, Christophe 2077
Leder, J.J. 995
Ledley, T.S. 1205
LeDrew, E.F. 1200, 2919
Lee, Cindy 276, 3015
Lee, D.-M. 2751
Lee, D.R. 3067
Lee, G.-H. 2751
Lee, H.J. 265
Lee, J.J. 527, 1016, 1688
Lee, J.-S. 2479
Lee, K.Y. 2661
Lee, R.F. 3211
Lee, S.-G. 2688
Lee, T. 2480
Lee, T.N. 3256
Leeben, Aina 1979
Lefebvre, Michel 1070
LeFur, J. 1704
Legg, Eugene 2494
Leggett, W.C. 941
Legler, D.M. 1896
Legutke, Stephanie 1779
Le Hajtre, Michel 2602
Lehmann, M. 1206
Leiko, A.G. 1866
Lein, A.Yu. 424, 469, 1323
Leiterer, U. 2960
Lelong, M.-P. 2452
Lemaitre, Rafael 515, 3224
Le Mehaute, B. 1179
Lemon, M.R. 2600
LeMone, M.A. 2523, 2524
Lemos, M.L. 1658
Lenschow, D.H. 2534
Lentz, S.J. 1154, 1233
Lenz, Jürgen 3160
Leonard, J.D. 1973
Leonard, L.A. 257
Leone, J.M. Jr. 755
Lepage, Serge 2460
Le Pichon, Xavier 286, 2122
Leppänen, J.-M. 931, 939
Le Provost, C. 8, 21
LeProvost, Ian 1734
Lerche, I. 1565, 2593
Lesser, M.P. 2832
Letelier, Ricardo 3015
LeTraon, P.Y. 1780
Leventer, Amy 1694
Levitt, G.J. 2305
Levykin, A.I. 2182
Lewis, B.L. 3013
Lewis, B.T.R. 419
Lewis, J.B. 2217
Lewis, J.K. 1072
Lewis, M.R. 207
Lewis, R.D. 2300
Lewis, S. 2604
Leybourne, M.I. 1501, 1560
Leykin, I.A. 1180
Li, Congling 287
Li, Fuk 1057
Li, Jindao 591
Li, Liangge 288
Li, Q. 2649
Li, Y.H. 2256
Li, Y.-H. 2558
Li, Z. 4, 624
Lichtentaler, Rainer 282
Lie, Vidar 1830
Liebmann, Brant 2522
Lien, Torleiv 991
Ligdas, C.N. 2004
Li, Guogang 2599
Lilley, F.E.M. 1462
Lilliyenberg, D.A. 354
Lim, K.-S. 2453
Lin, Chuanlan 2896
Lin, Chunhui 157
Lin, Hemao 325
Lin, R.Q. 1266
Lin, S.-H. 485
Lin, Xigui 7
Lin, Xuechun 142
Lindberg, D.R. 2202
Lindeman, R.L. 574
Lindgreen, Holger 825
Lindqvist, Lars 2315
Lindqvist, O. 2359
Lindstrom, J.E. 1705
Lindström, Magnus 1681
Lining, Tian 2304
Lins de Barros, H.G.P. 495
Linton, C.M. 705
Lipcius, R.N. 470, 2288
Lipiatou, Elisabeth 804
Lipman, P.W. 856
Liska, R.D. 329
Lisowski, Michael 869
Liss, P.S. 1944
List, J.H. 1831
Lister, G.S. 2136
Littlejohn, David 1308
Littler, D.S. 1689
Littler, M.M. 1689
Litton, R.W. 1723
Litvinov, E.M. 1363
Liu, Cangzi 3068
Liu, Guimin 2930
Liu, Mian 1502
Liu, P.L.-F. 692
Liu, P. L.-F. 2434, 2435
Liu, W.T. 2496
Liu, Xianbing 40
Liu, Zhenxia 3052
Livermore, R.A. 1364
Livingstone, D.R. 501
Lizárraga-Partida, M.L. 1659, 2324
Llobet, I. 1642
Lo, J.-M. 592, 1181
Lobanov, V.B. 1882
Lobel, P.B. 1706, 2325
Lobkovskiy, L.I. 1485
Locat, Jaques 272
Lochte, Karin 2763
Lock, J.A. 775
Lock, Jo 1463
Lockwood, S.J. 1046
Lodenius, Martin 2326
Loder, J.W. 627, 1155, 1804
Lodge, J.P. Jr 774
Loeb, V.J. 1599
Loewen, M.R. 1869
Logan, E.B. 2752
Lohmann, G.P. 2303
Lohmann, K.C. 841
Lohmann, K.J. 3164
Loka Bharathi, P.A. 496
Lomakin, P.D. 1853
Lomnitz-Adler, J. 410
Long, Austin 1746
Long, D.G. 1058
Longo, A. 75
Longuet-Higgins, M.S. 1244, 2439
Lopez, M.D.G. 433
Lorente, J. 2964
Lorenz, E.N. 1303
Lorenzo, J.M. 863
Loring, D.H. 1343
Loubet, Michel 1373
Louden, K.E. 1474
Loutre, M.F. 1903
Lovell, C.J. 289, 290
Lovell, J.H. 3114
Lovins, A.B. 2369
Lovins, L.H. 2369
Lowe, R.L. 1177
Lowell, R.P. 306, 1412, 2164
Loÿe-Pilot, M.D. 2957
Lozano-Alvarez, Enrique 1002
Lozovatskiy, I.D. 1888
Lu, Xiankun 177, 570, 571, 596, 1353
Lü, Xiaoqiao 231, 553, 554, 555
Lubchenco, Jane 602
Lucas, M.I. 1605
Lueck, R.G. 1227
Luhr, J.F. 875
Lukachin, V.N. 469
Lukashin, V.N. 1315, 1703
Lukatelich, R.J. 533
Luker, L.D. 2470
Lund, C.-E. 1513, 1525
Lundberg, Neil 870
Lundbergh, Ivar 2315
Lunde, Knud 1244
Lund-Hansen, L.C. 1369
Lunn, D.H. 1686
Luongo, Giuseppe 2144
Luternauer, J.L. 2126
Luther, D.S. 1909, 2461
Luther, G.W. III 2057, 2594, 2970, 2985
Luther, M.E. 2405
Lutjeharms, J.R.E. 679, 2402
Lutz, V.A. 448
Luyanas, V.Yu. 163
Luyten, J.R. 658
Lwiza, K.M.M. 2427
Lynch, W.E. Jr. 2368
Lyons, Jane 1682
Lysanov, D.Yu. 1182
Lysanov, Yu.P. 96
Lytle, V.I. 1848
Lyutsarev, S.V. 1969
Lyzenga, G.A. 3120

Ma, K.-F. 1107
Maage, Amund 1309
Maasch, K.A. 741
MacCarthy, Patrick 178
MacDonald, G.M. 2107
Macdonald, K.C. 895
Macdonald, R.W. 1991, 2061, 2062, 3257
MacDoran, P.F. 2346
Macdougall, J.D. 1434
Mace, T.H. 1716
Machemehl, J.L. 2025
Macintyre, I.G. 1745, 2592
Mack, Giles 1566
Mackas, D.L. 940
MacKenzie, B.R. 941
Mackenzie, F.T. 2507
Macklin, J.T. 693
Macko, S.A. 2035
MacLean, B.C. 2646
MacLeod, Norman 2098
Macpherson, E. 1008
Madec, Gurvan 1816
Madhupratap, M. 990, 1600
Madsen, J.A. 1512
Madsen, P.A. 1183
Maestrini, S.Y. 1601
MAFF 1088
Mahadevan, A. 2759
Mahaney, W.C. 2005
Mahoney, J. 1503
Mahoney, J.J. 1538
Mahoney, R.L. 134
Maier-Reimer, E. 1263
Maillet, P. 3106
Main, I.G. 2004
Maita, Yoshiaki 1329
Majda, A.J. 1245
Makarevich, V.A. 2378
Makarov, R.R. 1683
Makarov, S.A. 1840
Mäkelä, Kalervo 1330
Makin, V.K. 697
Makino, Masahiko 340
Makinson, K. 2404
Malan, D.E. 202
Malanotte-Rizzoli, Paola 1790
Malczyk, J.M. 219
Malinverno, Alberto 364
Malkowski, Krzysztof 220
Mallard, L. 2724
Malmcrona-Friberg, Karin 497
Malmgren, B.A. 2617
Maltrud, M.E. 727
Mal'tsev, N.E. 1854
Malumián, N. 3079
Malyutina, M.V. 1007
Manabe, S. 1277
Mandeville, Charles 1504
Mani, S.V. 2327
Mann, C.C. 1118
Mann, Paul 357, 363, 840
Manning, R.B. 516, 2814, 3190
Mansour, R.A. 470
Manzella, G.M.R. 3246
Manzo, M. 75
Maranto, Gina 620
Marchuk, G.I. 1278
Marcot-Coqueugniot, J. 534
Marcus, N.H. 2284
Marcus, S.W. 97
Margerum, Richard 2614
Mariam, D.W. 1335
Marin, M.G. 556
Marin, V.H. 1684
Mark, R.K. 585
Marmorino, G.O. 2481
Marom, M. 2916
Marotze, Jochem 1793
Marotzke, Jochem 1781
Marquart, G. 339
Marquart, Gabriele 1549
Marquet, Robert 1884
Marra, John 2936
Marsden, B.G. 2892
Marsh, B.D. 3103
Marshall, John 642
Marshall, K.C. 497
Marshall, N.J. 2815, 2816
Marska, G. 3184
Marston, P.L. 703
Mart, Yossi 1396, 3096
Martens, C.S. 826
Martens, P. 446
Martin, B.A. 1567
Martin, D. 1643
Martin, D.W. 771
Martin, E.E. 1434
Martin, J.H. 1602, 2218
Martin, J.M. 782
Martin, J.-M. 1995
Martin, J.M. 2957
Martin, J.W. 2285
Martin, Michael 3247
Martin, T. 756
Martin, W.R. 2580
Marty, B. 1413
Martynov, Yu.A. 386
Marumo, Katsumi 2624
Mascart, Patrick 1286
Mascle, G. 896
Mashchenkov, S.P. 1363

Maslova, N.B. 1128
Masó, Mercedes 14
Mason, R.P. 1992
Massana, Ramon 942
Masselink, Gerhard 254
Massoth, G.J. 2999
Massoud, M.S. 2188
Masumoto, Y. 1914
Mathew, Basil 736, 1285, 2516
Mathew, K.J. 2817
Matrai, P.A. 3016
Matson, E.A. 785
Matsuda, Hiroshi 827
Matsumoto, Ryo 291
Matsuoka, K. 3081
Matsuyama, Masaji 30
Matsuzaka, Shigeru 1491
Matteucci, Gianni 2502
Matthäus, W. 15
Matthäus, Wolfgang 3249
Matthews, S.B. 3227
Mattioli, F. 1832
Matul', A.G. 2298
Matusov, P.A. 1881
Matveyenkov, V.V. 2145
Mauchline, John 1628
Maugeri, T.L. 2684
Maul, G.A. 1379
Maurer, Don 471
Maury-Brachet, R. 563, 594
Maximov, S.E. 2903
May, P.R. 425
Maybury, C. 2197
Mayer, L.A. 318
Mayer, L.M. 1451, 2563
Mayfield, C.I. 552
Mayfield, Max 764
Maze, Gérard 2471
Mazzarella, Adriano 1833
Mazzega, P. 1170
McArdle, S.B. 2026
McBean, G.A. 1765
McCaffrey, Robert 1539
McCallister, Tracy 629
McCann, D.M. 2006
McCartney, B.L. 583
McCartney, M.S. 659, 1131, 2423
McCave, I.N. 2034
McClain, C.R. 1066
McClain, E.P. 2853
McClatchie, S. 3174
McClean-Padman, Julie 2412
McComb, A.J. 533
McConchie, D.M. 557
McCook, L.J. 3168
McCormick, P.V. 1660
McCutchen, C.W. 1739
McCutcheon, Mary 2351
McDaniel, S.T. 1220
McDermott, Frank 411
McDermott, J.J. 1009
McDonald, B.E. 2466
McDonough, W.F. 3104
McElhinny, M.W. 1463
McGee, T.M. 2347
McGlade, J.M. 918
McGrorty, S. 978
McHargue, L.R. 779
McIntyre, Neil 701
McKay, A.G. 2347
McKay, Keith 184
McKay, W.A. 1944
McKenzie, Dan 395, 865
McKenzie, J.A. 1430
McLachlan, Anton 202, 2026
McLachlan, J.L. 2307
McLaren, A.S. 1204
McLaughlin, R.B. 542, 1695, 1696
McLean, R.I. 271
McLoughlin, K.J. 460
McManus, G.B. 916, 2568
McMurtry, G.M. 1411, 3053
McNichol, A.P. 1984
McNutt, M.K. 1489
McPherson, B.F. 643
McVeagh, M. 1710
Meacham, S.P. 1156
Meakin, Paul 1760
Mearns, L.O. 739
Medina, J.R. 58
Mee, L.D. 3042, 3248
Meeder, J.F. 2589
Meehl, G.A. 143, 1924
Mehta, V.M. 1279
Mei, C.C. 714, 1175
Meiburg, E. 110
Meier, M.F. 2932
Meighen, E.A. 498
Meinesz, Alexandre 1690, 3169
Meissner, R. 409, 1511
Meissner, Rolf 3121
Mejia-Trejo, Adan 2959
Melice, J.L. 833
Mellor, G.L. 621
Mellors, J.E. 3198
Mellors, R. 1540
Melville, W.K. 1869, 2437, 2438
Menge, B.A. 2203
Menke, William 1718
Menon, P. 2770
Menshenina, L.L. 1683
Menvielle, M. 1464
Menzel, Paul 2494
Menzel, W.P. 2537
Menzies, Martin 380
Merklin, L.R. 1870
Merrett, Jane 2553
Mertz, Gordon 2910
Messieh, S.N. 2360
Messiter, A.F. 690
Metcalf, Kay 2860
Metcalf, M.A. 1140
Metrich, Nicole 3105
Meuller, J.L. 2936
Meyer, R.P. 903, 2643
Meyere, V.R. 2615
Meyer-Reil, L.-A. 2746, 2753, 2754, 2763
Meylan, A.B. 956
Meyrowitz, A.L. 1719
Michael, K.J. 2958
Michaud, F. 1478
Michelato, Antonio 1805
Michida, Yutaka 80
Middelburg, J.J. 292, 2067, 2074
Middlemost, E.A.K. 876
Mielke, P.W. Jr. 237
Mihalopoulos, N. 1296
Mikhaylova, L.A. 1892
Miklius, Asta 387
Mikumo, T. 3125
Miles, John 694, 2440
Miller, A.C. 1340
Miller, C.B. 517
Miller, C.E. 1711
Miller, H.C. 2875
Miller, Heinz 3234
Miller, J.E. 519
Miller, R.F. 1452
Miller, R.L. 643
Miller, R.N. 622
Miller, S. 3139
Millero, F.J. 1956, 1983, 2581
Mills, C.E. 2787
Minchinton, T.E. 2286
Minnett, P.J. 1762
Minster, J.B. 400
Minster, J.-B. 3083, 3238
Minster, J.F. 644
Miquel, J.C. 2219
Miranda, J.M. 1492
Mishenkin, B.P. 894
Mishima, Yasufumi 1331
Mishra, D.C. 1465
Mišič, M. 1400
Miskimmin, B.M. 1993
Mitchell, B.G. 1214, 1595, 1603
Mitchell, J.F.B. 1749, 1751, 1908
Mitchell-Innes, B.A. 2685
Mitnik, L.M. 98, 1882
Mitrovica, J.X. 2623
Mitskevich, I.N. 1661
Miura, Satoshi 412
Mix, A.C. 2382
Miyazaki, Akira 179
Mo, Cheol 2843
Moazzam, M. 3217
Modlin, R.F. 2287
Modoy, J.L. 2541
Moffitt, R.B. 2294
Moftah, A. 2678
Mohammed, Aphtaab 442
Mohan Kumar, N. 736
Molines, J.-M. 2911
Molitoris, H.P. 2761
Moll, A. 1902
Moloney, C.L. 1604, 1605
Momzikoff, Nicole 581
Monastersky, R. 1119, 3261
Monastersky, Richard 1752
Monger, B.C. 1606
Monger, Bruce 3000
Monin, A.S. 6, 1141, 1766
Monjaret, M.C. 3106
Montaggioni, L.F. 1745
Montagna, P.A. 2711
Montagner, J.-P. 2650
Montanari, Alessandro 1435
Montani, Shigeru 1331
Montenat, Christian 2125
Montevecchi, W.A. 1651
Mooney, W.D. 3121
Moore, D.A. 2492
Moore, D.C. 2328, 2361
Moore, G.E. 160
Moore, J.G. 1397
Moore, M.I. 2348
Moore, W.S. 797, 3034, 3066
Mopper, Kenneth 1348, 3017
Moran, M.A. 1970, 2308, 2982
Moran, P.J. 558, 968, 988
Moran, S.B. 3018
Morantine, M.C. 742
Morassutti, M.P. 1267
Moratti, G. 312
Morcrette, J.-J. 2533
Mordy, C.W. 917
Morehead, M.D. 2451
Moreira-Turcq, Patricia 782
Morel, André 2686
Morel, F.M.M. 3159
Morelli, A. 234
Morelli, J. 2957
Moretti, I. 882
Morey, R.M. 2929
Morgan, G.J. 3191
Morgan, J.J. 187
Morgan, John 2493
Morgan, Paul 2888
Morgan, V.I. 1849
Moriarty, D.J.W. 499
Moriceau, C. 2115
Morin, Pascal 3157
Morison, James 1806
Mork, Martin 19
Morley, J.J. 2099
Morozov, Ye.G. 76
Morrison, L. 2197
Morrison, W.L. 1611
Mortera, F. 3126
Mortimer, M.R. 1041
Morton, A.C. 293
Morton, Brian 979, 1089
Moseley, W.B. 85
Mosetti, Ferruccio 1883, 1910
Mosetti, Renzo 118, 2220
Moskalenko, V.N. 2063
Moslow, T.F. 2126
Mottl, M.J. 3019
Motyzhev, S.M. 1148
Mountfort, D.O. 491
Moura, J.M.F. 2939
Moussa, A.A. 294
Moustafa, M.Z. 201
Moustaka-Gouni, Maria 449
Moxter, Felix 2276
Mudford, B.S. 2187
Mudie, P.J. 2091
Mueller, P.A. 3074
Muenow, D.W. 877
Muir, D.G. 1654
Mukhopadhyay, P.K. 2189
Mukhopadhyay, Ranadhir 2659
Müller, D.W. 3074
Müller, Detlev 1229
Müller, H.-G. 2274
Müller, R.D. 365, 2116
Müller-Karger, F.E. 2885
Mulligan, S.G. 3120
Mullins, H.T. 2100
Munasinghe, Tissa 2630
Munda, I.M. 559
Munk, Peter 962
Munk, W.H. 715, 716
Munot, A.A. 1932
Murakami, Masato 1288
Muraleedharan, G. 2441
Muratov, L.F. 1796
Murphy, Edward 3142
Murphy, K.J.T. 2551
Murphy, P.P. 2513
Murray, R.W. 1398
Murray, Russel 1183
Murray-Wallace, C.V. 2027
Murty, P.V.S.P. 1341
Murty, T.S. 45
Musayeva, E.I. 2229, 2232
Musick, J.A. 2235
Mutter, J.C. 1512
Muzurov, Ye.L. 355
Myers, A.A. 1682
Mysak, L.A. 1198

Na, J.-Y. 2403
Naas, K.E. 1607
Nadaoka, Kazuo 2028
Naderi, F.M. 1058
Nadezhnyy, A.M. 1399
Näf, Carina 1947
Nafaa, M.G. 59
Nagata, Toshi 943
Nagaya, Yutaka 1960
Nagihara, Seiichi 3084
Naidu, V.S. 1280
Nair, N.U. 2441
Nair, S.R.S. 1600
Nakada, Masao 864
Nakai, Nobuyuki 295
Nakajima, Yasushi 537
Nakamura, Kiyoshi 1960
Nakamura, Shigehisa 1184
Nakamura, Toshio 295
Nakao, Seizo 2089
Nakata, Yoshikazu 537
Nance, J.M. 2329
Náñez, Carolina 3079
Naqvi, S.W.A. 1324
Naqvi, W.A. 3035

Narayanan, S. 1817
Narita, Hisashi 1332
Naryshkin, G.D. 2017
Natsukari, Yutaka 1735
Nausch, G. 2755
Nausch, Günther 3040
Naylor, E. 2281
Neale, P.J. 1697
Nederbragt, A.J. 3080
Nehring, Dietwart 3249
Neilson, Bruce 2843
Neklyudov, V.I. 1840
Nekrasov, G.Ye. 1541
Nelsen, T.A. 3064
Nemirovskaya, I.A. 1971
Neprochnov, Yu.P. 2165
Nesis, K.N. 2237
Neuman, Erik 1039
Neumann, E.-R. 382
Nevissi, A.E. 1320
Newberger, P.A. 651
Newley, T.M.J. 1246
Newton, P.K. 110
Ngo, H.D. 100
Ni, J.F. 2651
Ni, Zhe-ming 1310
Nicholls, K.W. 2404
Nichols, J.A. 238
Nichols, P.D. 1972
Nicholson, Hugh 3122
Nicolaidis, Argyris 3123
Nicolas, Adolphe 897
Nicollet, C. 1503
Niell, F.X. 791
Nielsen, P. 1837
Nielsen, Peter 1185
Nielsen, T.G. 922, 3158
Niemi, Åke 932, 1728
Nies, Hartmut 815
Nihoul, J.C.J. 2666
Niiler, P.P. 660, 1132, 2417, 2496
Nikanorenkov, B.P. 2170
Nikolaides, Georgios 449
Nikolayev, S.D. 2071
Nilsson, Claes 3200
Ning, Xiuren 2662
Ning, Zheng 560
Nishida, Shuhei 2293
Nishizawa, Azusa 1542, 2166
Nisizawa, Kazutosi 536
Nitta, Tsuyoshi 126
Nittrouer, C.A. 240, 266, 296, 579
Niu, Xuexin 158
Niu, Yaoling 3107, 3124
Nobili, Maurizio 2430
Noël, Denise 1445
Nof, Doron 1133
Noh, Y. 2413
Noji, T.T. 944, 2208
Nolan, C.V. 1347, 1978
Nolli, Vilia 2064
Nollkaemper, André 1736
Nolting, R.F. 1339
Nordberg, K. 1436
Norem, Harald 272
Noronha, R.J. 1324
Norris, R.D. 2299
Nosov, A.V. 1221
Nöthig, E.-M. 2221
Nott, J.A. 561
Novikov, V.M. 1835
Novozhilov, I.V. 1796
Nowaczyk, N.R. 3075
Nozaki, Yoshiyuki 1327
Nuccio, P.M. 385
Nunez, M. 2958
Nur, Amos 416, 1487
Nürnberg, Dirk 365
Nuttall, A.H. 95
Nyland, E. 2649
Oak, S. 496
Oba, T. 1437
Obaton, D. 2410
O'Brien, J.J. 2405, 2409
Ocampo-Torres, F.J. 1834
Ocean Drilling Program 1484, 1753 2862
Ochadlick, A.R. Jr. 857
Ochoa, J. 672
O'Connell, R.J. 373, 887
O'Connor, Dan 1063
Odate, Tsuneo 450
O'Donnell, James 3049
Oerter, Hans 3234
Ofoegbu, C.O. 1466
Ogorelec, B. 1400
Oh, I.S. 2442
O-Hara, Sukeo 827
Ohki, Kaori 2756
Ohlendorf, H.M. 1042
Öhman, Peder 776
Ohno, Yasuhiko 1886
Ohring, G. 2853
Ohta, Suguru 465, 1640
Ojeda, F.P. 472
Okaichi, Tomotoshi 1331
Okal, E.A. 1573
Okamura, Yukinobu 3090
Okazaki, Moriyoshi 1196
Oksanen, Lauri 1103
Okubo, Akira 916
Okubo, Yasukuni 340
'Olafsson, Emil 473, 980
Olausson, E. 2014
Olausson, Eric 2108
Olbers, D.J. 2458
Olenin, S.N. 2249
Olivar, M.-P. 945
Olivarez, A.M. 828, 2559
Oliver, J.E. 1059
Olmi, E.J. III 2288
Olson, D.B. 12, 27, 1137, 1172
Olson, Peter 2137
Olson, R.R. 2790
Olsson, R.K. 2618
Oltman-Shay, Joan 2433
Ono, Tomonori 2611
Onuoha, K.M. 1466
Oost, W.A. 734
Oppenheim, D.R. 1024
Oppenheimer, Michael 1086
Opperhuizen, Antoon 3218
Opsteegh, J.D. 1243
Orcutt, J.O. 390
O'Reilly, W.C. 60
Oren, A. 2757
Oreshkin, V.N. 185
Orlando, Luciana 309
Orlanski, I. 1925
Orme, A.R. 818
Ormsby, Bernard 2285
Orsi, T.H. 1401, 2588
Orth, R.J. 2823
Orvos, D.R. 1090
Oschmann, Wolfgang 297
Oshima, S. 2127
Osleger, David 1382
Osowiecki, Andrzej 3223
Östlund, H.G. 647
Östlund, Per 780
Ostrom, N.E. 2035
Ostrovskiy, L.A. 1881
Ott, A. 771
Ott, J.A. 2712
Ott, S.-T. 771
Ott d'Estevou, Philippe 2125
Ottens, J.J. 525
Otterson, Tim 1773
Oude Elferink, A.G. 2878
Ouellet, Sylvain 805
Ouellet, Yvon 58
Overloop, William 2842
Oviatt, C.A. 475, 2511
Ovsyannikov, A.Ye. 1571
Owen, R.M. 828
Owen R.M. 2559
Owens, L. 518
Owens, N.J.P. 494, 2514
Owens, W.B. 1054, 1715
Ozard, J.M. 2472
Ozmidov, R.V. 6
Pace, M.L. 3151
Pace, N.R. 500
Paden, C.A. 1915
Pae, S.J. 2687
Paerl, H.W. 1656
Paez-Osuna, Federico 1043
Paffenhöfer, G.-A. 1608
Page, D.S. 3212
Page, H.M. 2788
Page, M.A. 31
Pagès, F. 2222, 2789
Pagès, Francesc 2266
Pahl, Silke 1948
Pahl-Wostl, Claudia 3145
Paicheler, J.C. 1381
Paka, V.T. 6
Palacín, C. 1643
Palaganas, V.P. 2877
Paldor, Nathan 1133, 1231
Palmer, M.R. 223
Palomera, I. 2700
Paluch, I.R. 2534
Palumbo, Antonino 1833
Pandey, P.C. 2391
Pankratov, K.A. 1895
Panouse, M. 2215
Papathanassiou, E. 2335, 3204
Papathanassiou, Evangelos 2718
Pâquet, Marianne 805
Parasnis, S.S. 750
Parés-Sierra, Alejandro 1794
Parfitt, C.J. 104
Pariso, J.E. 413
Park, J.-S. 2688
Park, Kyeong 201
Park, M.M. 1157
Park, S.C. 298
Parker, Neil 1949
Parker, R. 595
Parker, R.A. 451
Parker, R.L. 1467
Parkinson, R.W. 2589
Parmentier, E.M. 3127
Paropkari, A.L. 1402
Parslow, J.S. 2223
Parson, L.M. 1406
Parsons, T.R. 599, 985
Parsons, Tom 1543
Parthasarathy, B. 1932
Parulekar, A.H. 2716
Parungo, F. 2552
Pascoe, P.L. 3206
Pascouet, Adrien 2007
Pashinski, D.J. 2600
Passi, Ranjit 1072
Passow, U. 1609
Patchett, P.J. 898
Paterson, J.S. 2931
Patterson, M.R. 2790
Patterson, R.T. 848
Pätzold, J. 1375
Paul, Uwe 2905
Paull, C.K. 826, 1406
Paull, K.M. 530
Pavillon, J.F. 562
Pavlova, G.Yu. 37
Pavoni, Nazario 1544, 1545
Pawlowski, Jan 526, 527
Pawsey, S.F. 1723
Payne, P.L.B. 912
Pazan, S.E. 2956
Pazos, Yolanda 2679
Pearce, A.F. 1158
Pearce, Julian 2889
Pearson, H.J. 1246
Pearson, N.D. 1159
Peckham, S. 1847
Pedersen, Amelie 3044
Pedersen, T. 1546
Pedersen, T.F. 2061
Pederstad, K. 2058
Pedlosky, J. 1247
Pedlosky, Joseph 111, 1807
Peebles, M.W. 2300
Peirce, C. 899
Pelayo, Aristeo 2176
Pelchat, B. 1839
Pelinovskiy, Ye.N. 57, 1828
Pelletier, Émilien 805
Peltier, W.R. 109, 729, 2156, 2623
Pempkowiak, J. 806
Peña, M.A. 207
Peng, T.-H. 2951
Penniman, C.A. 1638
Pennington, Michael 430
Pennisi, Elizabeth 2385
Pérez-Estaún, A. 361
Perfit, M.R. 877
Perillo, G.M.E. 256, 1060
Perissoratis, C. 356
Perlin, Marc 695
Perovich, D.K. 1207
Perret, E. 3175
Perry, E.C. 1746
Perttilä, Matti 784
Pesenson, M.Z. 2443
Peters, Hartmut 1232
Petersen, K. 2749
Petersen, S.P. 1994
Petersen, Ulrich 615
Peterson, C.H. 1021
Peterson, Ivars 1111
Peterson, M.S. 2238
Petrov, V.V. 1186
Pettersson, Karin 1610
Pettersson, S.E. 1546
Pettine, M. 1956
Petukhov, Yu.V. 1862
Petzold, H. 2755
Pfeffer, R.L. 2531
Pfeffer, W.T. 2932
Pfister, R.M. 1711
Pflueger, John 3135
Philander, S.G.H. 1808
Philip, J.M. 1376
Phillips, A.C. 2065
Phillips, J.D. 273
Phillips, L.F. 746
Phillips, O.M. 722, 726
Phillips, W.S. 2008
Phipps Morgan, Jason 871, 2138
Piatkowski, U. 2670
Picco, Paola 1850
Piccolo, M.C. 1060
Picer, M. 2844, 3041
Picer, N. 2844, 3041
Pichel, W.G. 2397
Pickup, R.W. 1662
Pielke, R.A. 1287
Pierce, S.D. 661
Pierini, S. 75, 120
Pierini, Stefano 77
Pierre, C. 1455
Pierre, G. 2124

Pierrehumbert, R.T. 1248
Piker, L. 2758
Pilipenko, A.I. 2167, 2168
Pilkey, O.H. 257
Pillar, S.C. 1005
Pinckney, J. 2310
Pindell, J.L. 910, 911
Pineda, Jesús 452
Pingree, R.D. 1160
Pinto, J.P. 1941
Pinty, J.-P. 1286
Piotrowicz, S.R. 1942
Piper, D.J.W. 281, 320, 2036
Pisarevskiy, A.M. 1572
Pisias, N.G. 838
Pitcher, G.C. 2689
Pitman, A.J. 2503
Pittalwala, Iqbal 2521
Pittman, L.J. 2308
Planke, Sverre 1547
Plant, W.J. 63, 1187, 1834, 2392
Platt, R.H. 2875
Platt, Trevor 81, 946
Plotkin, A.M. 96
Plötz, J. 2198
Plusquellec, A. 2330
Pocklington, Roger 1973
Pogorzelski, S.J. 1188
Pohle, D.G. 981
Pokras, E.M. 330
Pollard, John 1446
Pollitz, F.F. 1493
Polnikov, V.G. 61
Polyak, L.V. 1687
Pomeroy, L.R. 2261
Ponater, M. 144
Ponomareva, N.A. 1826
Ponte, R.M. 44
Poole, A.J. 1438
Poole, R.K. 490
Poon, Y.-K. 1877
Poore, R.Z. 2090, 2591
Poorooshasb, F. 576
Popp, B.N. 2971
Poremba, K. 2845
Porntepkasemsan, Boonsom 1320
Porta, V. 180
Porter, M.B. 90
Portnoy, J.W. 203
Posey, M.H. 474
Postma, L. 790
Potemra, J.T. 2405
Potter, Charles 1040
Poulicek, Mathieu 1663
Pourkaviani, M. 99
Povey, Anna 2342
Powell, M.D. 1292
Powell, R.D. 2051, 2065, 2066
Power, J.H. 1611
Powlik, J.J. 1612
Prabhu, A. 1921
Prabhu, S.K. 2759
Prakash, T.N. 2595
Prandle, D. 1961
Prandle, David 1782
Prasad, K. 2530
Prasanna Kumar, S. 1795
Prater, M.D. 3228
Pratt, L.J. 662
Pratte, J.M. 728
Precoda, Norman 1101
Preining, Othmar 740
Prell, W.L. 1425
Preller, R.H. 1208
Preston, M.R. 2553
Prevedelli, D. 2840
Prevot, R. 2652
Prézelin, B.B. 947
Pribble, J.R. 1328
Price, A.R.G. 593
Price, D.W. 588
Price, J.S. 2538
Price, N.M. 2690, 3159
Price, R.C. 3108
Price, W.A. 584
Priddle, J. 1988
Pridmore, R.D. 2846
Prieur, D. 2760, 2776
Primack, Harel 2473
Primmer, T.J. 1403, 3055
Pringle, M. 381
Prithviraj, M. 2595
Probyn, T.A. 2572
Proehl, J.A. 1189
Pruysers, P.A. 2067
Pubellier, M. 2128
Pubellier, Manuel 367
Pugnaghi, S. 347
Pujol, Cl. 311
Pujos, Michel 819
Purcell, J.E. 2791
Purdie, D.A. 1620
Puteanus, D. 3065
Putt, Mary 2691
Pybus, Vivien 491

Qiu, Bo 1809
Qiu, X.-F. 2474
Qiu, Y.J. 807
Qiu, Yuanxi 3091
Queffeulou, Pierre 2963
Queguiner, François 228
Quélennec, R.-E. 258
Quick, J.E. 2634
Quick, M.C. 1370
Quinn, T.M. 841, 2102
Quinn, T.P. 458

Rabinovich, A.B. 1276
Rabinowitz, D.L. 2892
Rabinowitz, P.D. 383
Radach, G. 1902
Radford-Knoery, Joel 2995
Radionov, V.F. 2549
Radionov, W.F. 2960
Radke, L.F. 1927
Raefsky, Arthur 3120
Raffaelli, D. 434, 2200
Raftery, A.E. 1199
Raghukumar, Chandralata 2850
Raghukumar, S. 992, 2850
Rai, Hakumat 176
Raichlen, Fredric 2915
Rajaram, Mita 341
Rajeevan, M. 2546
Raju, G.R.K. 2598
Rakocinski, Chet 982
Raloff, Janet 3254
Rama Murthy, V. 414
Raman, Sethu 762, 763, 1921
Ramana Murty, T.V. 1222
Ramelow, G.J. 1037
Ramesh Kumar, M.R. 1281
Ramírez, Marta 2320
Ramp, S.R. 673, 747
Rampino, M.R. 1421
Randall, D.A. 2504
Raney, D.C. 1317
Raney, R.K. 1057
Ranger, K.B. 1249
Rangin, Claude 366, 367
Rao, D.P. 1795
Rao, G.R.L. 1280
Rao, G.S. 1707
Rao, K.K. 2828
Rao, R.R. 2515, 2516
Rao, V.P. 2596, 2597
Rapalini, A.E. 2139
Rasch, P.J. 135
Raschke, E. 151, 1259
Rassoulzadegan, Fereidoun 1590
Rat, P. 319
Rathbun, G.B. 1629
Ratnieks, F.L.W. 2267
Rau, G.H. 789, 842, 2692
Rau, R. 2761
Raup, D.M. 849
Rauschert, Martin 3170, 3183, 3192
Ravat, D.N. 337
Ravenscroft, Jill 2561
Ravvin, A.V. 1868
Ray, R.D. 1168
Ray, R.I. 101
Ray, S. 1708
Ray, T.K. 2449, 2517
Rayzer, V.Yu. 1835
Raznitsin, Yu.N. 2169
Rea, D.K. 828, 838
Readman, J.W. 3042
Reale, A. 2861
Recchia, C.A. 965
Redaelli, Massimo 2064
Redaño, A. 2964
Reding, L.M. 368
Reed, D.L. 870
Rees, A.P. 494
Rees, W.G. 700
Regan, R.D. 1360
Regoli, Francesco 1709
Reichardt, W. 2725, 2732, 2736, 2758, 2762
Reichardt, Wolfgang 2733
Reid, D.M. 2818
Reid, J.P. 1629
Reid, J.W. 1010, 2819
Reid, S.B. 963
Reimers, C.E. 2068
Reineck, H.-E. 192
Reisenbichler, K.R. 1952
Reiter, E.C. 239
Rendas, M.J.D. 2939
Rendigs, R.R. 2023
Renne, P.R. 388
Rennie, S.E. 625
Repeta, D.J. 206, 3020
Requejo, A.G. 2582
Reverdin, G. 1783
Revets, S.A. 2301
Reyes, Sergio 2959
Reynolds, J.E. III 1630
Reynolds, R.W. 2398
Reysenbach, A.L. 1654
Rheinheimer, G. 2731, 2778
Rheinheimer, Gerhard 2763, 3176
Rhines, P.B. 1784
Rhodes, M.C. 1453
Rhodes-Robinson, P.F. 2444
Ribeyre, F. 563, 594, 2313
Ribic, C.A. 459
Ricard, M. 1615
Ricci, N. 3196
Ricci, Nicola 1044
Rice, A.L. 519
Richard, J.M. 948
Richards, K.J. 112
Richards, M.A. 2146, 2179
Richards, P.C. 2590
Richardson, B.J. 3247
Richardson, Katherine 453
Richardson, P.L. 663, 1061
Richardson, R.M. 368
Richmond, Mark 1740
Ridgeway, R.G. Jr. 181
Riebesell, U. 2224
Riedlinger, S.H. 1208
Riege, H. 2764
Riegl, Bernhard 2869
Rieland, M. 1259
Rieley, Gareth 299
Riemann, Bo 454
Riemann-Zürneck, Karin 2792
Rienecker, M.M. 622
Rieper-Kirchner, M. 535, 2765
Rijnsdorp, A.D. 1623
Riley, J.J. 2452
Ringwood, A.H. 564
Rino, C.L. 100
Rintoul, S.R. 628
Rippeth, T.P. 115
Ritsema, R. 3213
Roark, J.H. 1366
Robb, J.M. 830
Robbins, Paul 111
Robert, G. 984
Roberts, C.M. 3207
Roberts, D. 1644
Roberts, Emyr 1161
Roberts, G. 1810
Roberts, Gwyn 1161
Roberts, Leslie 616, 1754
Robertson, A.H.F. 1438
Robertson, A.I. 227
Robertson, B.L. 2715
Robertson, D.S. 2339
Robertson, J.S. 717
Robinson, A.V. 2404
Robinson, Carol 2556
Robinson, I.S. 1834, 2213
Robinson, N. 1946
Robson, E.A. 2797
Roch, Michel 1949
Rockel, B. 151
Roden, G.I. 645, 1134
Rodger, G.K. 2328, 2361
Rodgers, E.B. 765
Rodhe, H. 2548
Rodhe, Johan 113
Rodrigues, Sergio de Almeida 3224
Roecker, S.W. 2651
Roelandts, Iwan 2972
Roemmich, D. 632
Roemmich, Dean 629, 1110
Roff, J.C. 1686
Rogachev, K.A. 2225
Rogers, J.J.W. 359
Rogers, P.H. 1874
Rohling, E.J. 843, 1439
Rohr, Kristin 2126
Rojanakamthorn, Somchai 45
Rolke, Manfred 3160
Romankevich, Ye.A. 1953
Romano, J.-C. 1884
Romans, Kristen 3153
Roobol, M.J. 353
Roper, D.S. 2331
Rose, C.W. 289, 290
Rosen, R.D. 44
Rosenberg, N.D. 1414
Rosencrantz, Eric 357, 840
Rosenthal, Wolfgang 688
Rosman, K.J.R. 182
Rosnes, J.T. 991
Ross, J.B. 595
Ross, S.T. 2238
Rossby, T. 1811
Rossignol-Strick, Martine 2081
Rossow, W.B. 1256, 2505
Rostek, Frauke 1404
Rostomov, Sergei 1007
Rothans, T.C. 1340

Rothlisberg, P.C. 518
Rothschild, B.J. 1582
Rouhi, Ali 2943
Roure, F. 882
Rowe, F.D. 1143
Rowe, G.T. 1984, 2250, 2708
Roy, Peter 1737
Royan, J.P. 2576
Royer, J.F. 2953
Royer, J.-Y. 369
Rubin, C.M. 900
Rudek, Joseph 2226
Rudyakov, Yu.A. 1584, 1613
Ruff, L.J. 421
Rüger, H.-J. 2774
Rukhin, A.L. 2883
Rummel, R. 1468
Runge, Kirsten 145
Ruprecht, E. 2947
Rusetskiy, K.K. 1813
Russell, M.P. 850
Rutledge, Glenn 2494
Ruvinskiy, K.D. 62
Ruvinsky, K.D. 1190
Ruz, M.-H. 255
Ryer, C.H. 2823

Sabine, Chris 3014
Sachsenberg, S. 2766
Sackett, W.M. 2227
Saetre, Roald 19
Sahagian, D.L. 2610
Sahu, K.C. 3037
Saïd, Frédérique 1916
Saint-Marc, Pierre 1454
Sakagawa, G.T. 2366
Sakai, Hitoshi 384
Salazar, M.H. 3214
Salazar, S.M. 3214
Saleeby, J.B. 900
Saliot, A. 807
Saliot, Alain 804
Salisbury, J.I. 2469
Salmon, Rick 114
Salmun, Haydee 1885
Salomon, J.-C. 13
Salstein, D.A. 44
Salters, V.J.M. 1548
Saltzman, Barry 741
Samelson, R.M. 1247, 1812
Sammarco, P.W. 983
Sampou, P. 475
Sánchez, E.L. 2289
Sánchez, Elias 2824
Sandberg, Eva 966, 3203
Sanderson, B.G. 1250
Sand-Jensen, K. 1019
Sandler, Henrik 1631
Sandulli, Roberto 2332
Sandwell, D.T. 816
Sanford, T.B. 1232
Sankaranarayanan, V.N. 2569
Sankarankutty, C. 2693
Sano, Yuji 3109
Sansone, F.J. 2147
Santamaria, R. 1724
Santelices, B. 2307
Sañudo Wilhelmy, S.A. 224
Sarachik, E.S. 1792, 1793, 1918
Sarda, Philippe 3101
Sarma, V.V. 1341, 2598
Sarmiento, J.L. 313, 794
Sarvala, Jouko 2290
Sarygin, S.M. 2141
Sasamal, S.K. 2518
Sass, H. 1470
Sastry, J.S. 1222, 1274, 1281
Satake, Kenji 1107, 2445
Sathe, Veena 992
Sathyendranath, Shubha 81, 444, 946, 1614
Sato, Kachishige 2140
Sato, Ryosuke 402
Satyanarayana, D. 786, 1341
Sauriau, P.-G. 505
Sauter, D. 2129
Sautter, L.R. 1017, 2362
Savenko, V.S. 1957, 2192, 2193
Savostin, Yu.M. 1152
Savoye, Bruno 320
Sawatari, Hideyuki 389
Sayed Ahmed, M. A.-O. 2302
Sborshchikov, I.M. 1485
Scandone, Roberto 2144
Scarano, Gioacchino 183
Schaefer, M.B. 600
Schafer, C.T. 565
Scharenberg, W. 2333
Scheffer, Marten 2340
Scheibling, R.E. 2286
Scheirer, D.S. 895
Schemenauer, R.S. 2965
Schenke, H.W. 3232
Scherneck, H.-G. 1469
Schieldrop, Bonsak 272
Schiewer, U. 2745, 2767, 3148
Schiewer, Ulrich 3178
Schilling, J.-G. 415
Schimmelmann, Arndt 829
Schinese, W. 3155
Schintu, M. 808
Schirinzi, Gilda 1174
Schlax, M.G. 926
Schlee, J.S. 830
Schlese, U. 144
Schlitzer, Reiner 2406
Schloss, I. 2224
Schlungbaum, G. 2755
Schlungbaum, Günter 3040, 3054
Schlünzen, K.H. 1948
Schlüter, Michael 274
Schmager, G. 2955
Schmeling, Harro 1549
Schmetz, Johannes 1898, 2499, 2535, 2949
Schmidt, Heike 2068
Schmidt, T.M. 500
Schmincke, H.-U. 3117
Schmitz, W.J. Jr. 663
Schneider, D.C. 2251
Schneider, Gerald 3160
Schneider, J.F. 903
Schneider, J.L. 1381
Schnitker, Detmar 1451
Schoeffield, A.J. 2768
Scholl, D.W. 1494
Scholz, C.H. 3125
Schönfeld, Joachim 2109
Schönwiese, C.-D. 145, 1268
Schoonmaker, P.K. 2341
Schopp, Richard 1784
Schostak, V. 2749
Schott, Friedrich 2906
Schotte, Marilyn 1685
Schrader, Hans 331
Schröder, Michael 678
Schroeder, Paul 2388
Schubert, G. 2175
Schubert, W.H. 148
Schuler, D.L. 63
Schulson, E.M. 1202
Schult, F.R. 2635
Schultz, W.W. 690
Schulz, D. 2769
Schulz, D.E. 3043
Schulz, Knud 3193
Schulz, Sigurd 3149
Schumann, E.H. 753
Schwartz, S.Y. 901, 902
Schweiger, Axel 2934
Schweitzer, P.N. 2303
Schwing, F.B. 1785
Schwinghamer, P. 1025
Sciandra, Antoine 543
Sclater, J.G. 3084
Scofield, R.A. 2542
Scoggins, J.R. 617
SCOR 1575
Scott, D.B. 3197
Scott, S.D. 1531
Scotti, J.V. 2892
Scotti, Oona 416
Scrope-Howe, S. 443
Seaver, Jeff 2367
Sebai, A. 1550, 1551
Sebens, K.P. 2790, 3171
Sedov, V.V. 2165
Sedwick, Peter 2985
Seiderer, L.J. 438
Seitzinger, S.P. 210, 219, 2228
Sekine, Masahiko 2876
Sekretov, S.B. 1530
Selvarajan, Sudha 1275
Semenov, Ye.V. 1813
Semenova, T.N. 2232
Semiletov, I.L. 1964
Semiletov, I.P. 1344
Sen, P.N. 2450
Seneca, E.D. 171
Sen Gupta, B.K. 524
Sen Gupta, R. 2363
Senin, B.V. 1554
Sepkoski, J.J. Jr. 851
Sergeyev, B.N. 1197
Sergeyev, K.F. 2141
Servain, Jacques 630
Servais, P. 2770
Serve, Léon 1966
Service, S.K. 2259
Seyler, Patrick 1995
Sha, Weiming 754
Shablyugin, A.I. 1879
Shalapyonok, A.A. 447
Shankaranarayana Guptha, M.V. 540
Shannon, L.V. 1818
Shannon, P.M. 1397
Shapiro, G.I. 96
Shapiro, L.H. 1209
Sharfarets, B.P. 1857
Sharifi, A.R. 2334
Sharma, A.K. 1289
Sharp, J.H. 795, 3021
Sharples, J. 115
Shatkay, Michal 2566
Shaw, H. 1403
Shaw, H.F. 3055
Shaw, J. 2056
Shaw, P.R. 1361
Shaw, P.-T. 64
Shaw, T.J. 196
Shaynurov, R.V. 2170
Shchurov, V.A. 1223, 1224
Shea, M.A. 1073
Sheehan, A.F. 2653
Shemdin, O.H. 73, 1125
Shemer, L. 2916
Shemer, Lev 2894
Shemshura, V.Ye. 1980
Shen, G.T. 1377
Shenk, W.E. 2529
Sheppard, C.R.C. 593
Sherrell, R.M. 3022
Shetye, S.R. 2414, 2424
Shi, Junxian 2662
Shi, Zhili 231, 553, 554, 555, 567
Shi, Zhong 2037, 3046
Shibuya, Kazuo 80
Shieh, Y.-T. 528
Shih, X.R. 903
Shiki, Tsunemasa 295
Shiller, A.M. 2583
Shillington, F.A. 679
Shilo, N.A. 2171
Shim, J.H. 2694
Shimakawa, Yasue 1552
Shin, Y.K. 2695
Shine, K.P. 164, 2506
Shipilov, E.V. 2172
Shipp, R.C. 2049
Shirley, M.A. 2820
Shiryaev, A.N. 2883
Shitashima, Kiminori 1354
Shkarubo, S.I. 1530
Shmelev, I.P. 1703
Shoberg, Tom 3092
Sholkovitz, Edward 3023
Shrayer, B. 1812
Shul'kin, V.M. 275
Shushkina, E.A. 2229
Shvarts, K.G. 1890
Sibuet, J.-C. 1474
Sich, H. 2771
Siedler, Gerold 2905
Siegenthaler, U. 1206
Siegenthaler, Ulrich 794
Siegmann, W.L. 717
Siegrist, H.G. Jr. 820
Sigmundsson, Freysteinn 1553
Sigurdsson, H. 2039, 2101
Sigurdsson, Haraldur 1504
Sigvaldason, G.E. 2629
Sikes, E.L. 321
Sikora, P.J. 2618
Silver, E.A. 2130
Simanin, A.A. 1871
Simarski, L.T. 1104
Simmer, C. 2947
Simmonds, Ian 2933
Simmons, H.B. 583
Simon, Meinhard 1664
Simoneit, B.R.T. 1946
Simpson, J.H. 115, 1725, 1764, 2427
Simpson, J.J. 2416
Simpson, Joanne 2543
Singh, B.P. 341
Singh, R.N. 2638
Singh, S.K. 3126
Singh, S.V. 2539
Sinha, Ashok 2506
Siokou-Frangou, I. 2335
Sipilov, E.V. 1554
Siriwong, Cherdchan 2847
Sirocko, Frank 322
Sissenwine, M.P. 1098
Sivalingam, P.M. 536
Sivukha, N.M. 2168
Sjöberg, L.E. 2117
Skaarup, Bo 962
Skei, Jens 3024
Skiba, Yu.K. 1278
Skjoldal, H.R. 949
Sklyarov, V.E. 2903
Skogseid, Jakob 1547
Skóra, K.E. 964
Skupniewicz, C.E. 1928
Slavin, Walter 2973
Sleath, J.F.A. 723
Slepyshev, A.A. 1838
Slesser, G. 614
Slezkin, N.A. 1293
Sloan, H. 358
Smale, M.J. 2812
Small, Hamish 1311
Smetacek, V. 2224
Smethie, W.M. Jr. 1136
Smith, E.R. 259
Smith, J.N. 565
Smith, N.D. 2065
Smith, P.C. 1785

Smith, P.J. 1710
Smith, Quinton 88
Smith, R.G. Jr. 3032
Smith, R.K. 1933
Smith, Ronald 1091
Smith, S.L. 940, 1011
Smith, S.V. 1333, 1634, 1974, 2507, 3030
Smith, T.J. III 2254
Smith, W.O. Jr. 950, 2216, 2696
Smyth, W.D. 729
Snegovskoy, S.S. 2173
Snoeijs, P. 1026
Snyder-Conn, Elaine 1092
Sobey, R.J. 65
Sobolev, A.V. 2143
Soetaert, Karline 2268, 2713
Sogard, S.M. 2252
Sokolovskiy, M.A. 1251
Solé-Cava, A.M. 2269
Solheim, Anders 2038
Šolić, M. 2772
Solliday, J.D. 2311
Solntseva, N.I. 1766
Solomon, S.C. 2653
Soloviev, S.L. 404
Solov'yev, A.V. 1767
Solov'yev, S.L. 417, 418
Somayajulu, B.L.K. 2974
Somayajulu, Y.K. 1222
Somers, I.F. 2291
Somerville, R.C.J. 127, 1919, 1920
Sommer, Ulrich 951
Song, G.-S. 419
Soomere, T.S. 1958
Soong, S.-T. 2543
Sørensen, O.R. 1183
Sorgard, Eirik 2482
Sorknes, Ragnhild 331
Sorokin, Yu.I. 1645
Soto, Doris 1012, 1013
Sournia, A. 1615
Soward, A.M. 1758
Spakman, Wim 2174
Spall, M.A. 1786
Spanier, E. 3180
Spanier, Ehud 2667
Sparks, D.W. 3127
Sparks, R.S.J. 2039
Speed, R.C. 912
Speer, K.G. 648, 2423
Spence, G.S.M. 1240
Spencer, D.F. 2370
Spencer, D.W. 3008
Spencer, K.J. 1538
Spencer, R.W. 2497
Sperber, K.R. 2525
Spiesberger, J.L. 1217
Spiess, Volkhard 1404
Spilhaus, Fred 1105
Spindel, R.C. 719
Spohn, Tilman 2175
Spooner, N. 3215
Spratt, A.K. 210
Sreekumaran Nair, S.R. 990
Srokosz, M.A. 686
St. John, M.A. 1612
St. Leger-Dowse, M. 587
Stackebrandt, Werner 370
Stähler, Ursula 1268
Stakes, Debra 3066
Stal, L.J. 2748, 2773, 2775, 2833
Stancliffe, R.P.W. 3081
Stanev, E.V. 16
Stanic, S. 101
Stanley, D.J. 1365, 1367, 1443
Stashchuk, M.F. 37, 193
Stashchuk, N.M. 1821
Staudigel, H. 390
Staveley, Michael 1108
Stax, Rainer 1440
Stebbing, A.R.D. 3245
Steele, J.H. 3225
Steele, K.E. 1191
Stefanick, Michael 2135
Steffen, Konrad 2934
Steger, J.M. 696
Stein, C.A. 1475
Stein, R.S. 3093
Stein, Ruediger 1440
Stein, Seth 348, 2176, 3092
Steinberg, B.Z. 1872
Steinberg, C.R. 2901
Stemp, R.W. 2114
Stenman, Olavi 1626
Stephan, J.-F. 371
Stephen, R.A. 2164, 2587
Stephens, W.E. 2631
Stephenson, Mark 3216
Stephenson, P.W. 2944
Stergiopoulos, Stergios 2475
Stergiou, K.I. 549
Stern, M.E. 122, 724
Sternberg, L. deS.L. 2830
Sternberg, Peter 1239
Sterrer, Wolfgang 2270, 2271, 2272
Stevens, A.E. 1108
Stevens, D.P. 1787, 1788
Stevens, J.D. 460
Stewart, R.H. 2417
Stewart, T.G. 2069
Stewart, V. 2197
Stewart, W.K. 1062
Stiassnie, Michael 2390
Stigebrandt, Anders 781
Stimson, John 2793
Stocker, L.J. 996, 997
Stocker, T.F. 17
Stoffa, P.L. 3128
Stöhr, Manfred 3208
Stoker, M.S. 2070
Stolper, E.M. 379
Stommel, H.M. 658, 1109
Stone, Richard 1755
Stoodley, Robert 2357
Stott, L.D. 1433, 2094
Stowe, L.L. 2536
Stramma, Lothar 32
Straub, David 1774
Strauss, Stephen 1120
Streckeisen, A.L. 1500
Strickland, M. 595
Stringer, W.J. 2926, 2935
Strizhov, V.P. 2071
Stronach, James 45
Strub, P.T. 674
Stuart, V. 1005
Stuart, Venetia 2230
Stupakova, T.P. 1665
Sturova, I.V. 1841
Su, Jilan 40
Su, Wei-jia 420
Suárez, E. 2785
Suayah, I.B. 359
Subrahmanyam, C. 2638
Subrahmanyam, V. 1496, 1555
Subramanian, B. 2759
Sud'bin, A.I. 1216
Suginohara, Nobuo 18
Sugrobov, V.M. 345
Suh, M.C. 2654
Suhr, Günter 1556
Sui, Qingbo 2221
Sujatha, C.H. 1355
Sukhanov, M.K. 393
Sulisz, Wojciech 1178
Sullivan, B.K. 2668
Sullivan, K.M. 2710
Sumitra-Vijayaraghavan, i 2576
Summons, R.E. 796
Sun, Baojing 153
Sun, Bingyi 190, 553, 554, 555, 566, 567, 570, 571, 596
Sun, Binyi 231
Sun, Mingyi 276
Sun, S.-T. 166
Sun, Yinglan 33
Sunamura, Tsuguo 3047
Sundaram, S.E.R.B. 51
Sundbäck, K. 1026
Sundbäck, Kristina 1698, 3200
Sundquist, E.T. 2389
Suprun, A.D. 1866
Susskind, Joel 2501
Suter, J.R. 3197
Sutton, Jeff 3229
Suyehiro, Kiyoshi 2166, 2177
Suzuki, Reiko 455
Suzuki, Yuzuru 1960
Svendsen, Einar 19
Sverrisson, Marteinn 1461
Sviridov, N.I. 1405
Svistunov, Yu.I. 2172
Swail, V.R. 751
Swallow, J.C. 2906
Swanberg, I.L. 1646
Swart, P.K. 995
Swartz, R.C. 1996
Swartzman, Gordon 2204
Swift, J.H. 670
Swift, James 629
Swift, M.G. 1476
Symonds, P.A. 2136
Synolakis, C.E. 692
Syvitski, J.P.M. 2040
Szabo, B.J. 2022
Szefer, Krystyna 568
Szefer, Piotr 568
Szmant, A.M. 995
Szymanski, J.S. 2160

Tabata, S. 646
Tada, Ryuji 2096
Taft, B.A. 675, 2415
Tagami, Takahiro 1460
Taira, Keisuke 38, 1135
Takahashi, Masaaki 1926
Takatsuki, Yasushi 2975
Takayabu, Y.N. 1288
Takeoka, H. 809
Takeoka, Hidetaka 1789, 1886
Takle, E.S. 755
Taljaard, S. 1778
Talley, L.D. 631, 632, 652, 676, 1110
Tambiyev, S.B. 1315, 2078
Tamburrino, A. 1102
Tamura, Yoshihiko 3110
Tan, T.L. 2774
Tanabe, Shinsuke 810, 1093
Tanahashi, M. 3129
Tanaka, Ken 1929
Tanaka, Masao 2205
Tanaka, Miho 1321
Tanaka, Minoru 1822
Tanaka, Yuichiro 2611
Tanaka Tasuku 2854
Tanba, S. 2393
Tang, C.L. 1846
Tang, Wenqing 2496
Tang, Yuxiang 46
Tanimoto, Toshiro 2650
Tanoue, Eiichiro 3025
Tanveer, S. 1836
Tao, Hiroaki 179
Tao, W.-K. 2543
Tappert, F.D. 51
Tarantola, Albert 2663, 3123
Tarasov, S.P. 1870
Tarduno, J.A. 2148
Tariq, Jaleel 3217
Tarits, Pascal 346
Tas, J.W. 3218
Tashiro, Masatoki 1735
Tassan, Stelvio 1589
Tatsumi, Y. 391
Tatsumi, Yoshiyuki 392, 1505, 3097
Tauxe, Lisa 342
Taviani, M. 2110
Taylor, A.H. 952
Taylor, Brian 1557, 2019
Taylor, D.W.A. 904
Taylor, F.J.R. 1592
Taylor, G.T. 2578
Taylor, John 2483, 2489
Taylor, P.N. 293
Taylor, P.T. 372, 1366
Taylor, Susan 2196
Taymaz, Tuncay 865
Te, F.T. 1045
Teague, W.J. 2399
Tedesco, L.P. 1383
Tee, K.T. 664
Tegner, M.J. 829, 2714
Teksöz, G. 1997
Telnaes, Nils 3136
Terauchi, Kazuki 1653
Terray, E.A. 1162
Tester, P.A. 2834
Thayer, C.W. 1453
Theodorou, A.J. 2895
Thiede, Jörn 3235
Thiéry, Cécile 582
Thingstad, T. 2727
Thiria, S. 2490
Thirlwall, Matthew 380
Thistle, David 2805
Thomas, D.J. 2062
Thomas, D.N. 2306
Thomas, F.C. 2111
Thomas, J.D. 2292
Thomas, M.R. 1159
Thompson, A.B. 1558
Thompson, D. 461
Thompson, G.A. 1543
Thompson, J.D. 2399
Thompson, P.K.M. 2821
Thompson, R.N. 2655
Thomsen, H.A. 923, 953
Thomsen, R.O. 2593
Thomson, D.W. 1899
Thomson, Dennis 1720
Thomson, P.J. 2348
Thomson, R.E. 1763
Thorleifson, J.M. 104
Thorne, P.D. 215
Thornton, D.C. 181
Thornton, E.B. 70, 2916
Thorpe, J.P. 2269
Thorpe, S.A. 1965
Thors, Kjartan 260
Thorsos, E.I. 1192
Thouzeau, G. 984
Thouzeau, Gérard 476, 477
Thunell, R.C. 1017, 2362
Tibshirani, Robert 575
Tichelaar, B.W. 421
Tien, Georgia 1337
Tilbrook, B.D. 1337
Til'man, S.M. 1420
Tilton, George 3117
Timonin, A.G. 1616
Timoshenko, V.I. 1870
Tintoré, Joaquín 14
Tirendi, F. 227
Tishchenko, P.Ya. 193
Titgen, R.H. 1068, 1069
Titlyanov, E.A. 2794
Tjemkes, Stephen 2504
Tjernström, Michael 2526

Tkalin, A.V. 1998
Toba, Yoshiaki 72, 608, 609
Todd, C.D. 3172
Toggweiler, J.R. 2425
Tokos, K.L.S. 1867
Tolman, H.L. 2432
Tomadin, Luciano 2072
Tomasko, D.A. 1691
Tomlinson, J.S. 1364
Toner, Mike 2367
Toole, Joseph 184
Toomey, D.R. 2180
Toompuu, A. 1958
Torgersen, Thomas 3049
Torii, Masayuki 1457
Torres, J.J. 2692
Torrontegui, F. 2307
Torsvik, Terje 991
Tortora, Paolo 309
Tørum, Alf 1830
Townsend, A.W. 1674
Tralli, D.M. 905
Travis, B.J. 1414
Trefry, J.H. 3000, 3026
Tréguer, Paul 3201
Trenberth, K.E. 2547
Trevorrow, M.V. 102
Trimborn, Peter 2080
Trincardi, Fabio 2073
Trivett, D.A. 1162
Trizna, D.B. 2484
Trocine, R.P. 3026
Troisi, S. 1724
Trowbridge, J.H. 1154, 1233
Trumbore, S.E. 1136
Trump, C.L. 1163
Tsay, T.-K. 66
Tsekhonya, T.I. 1510
Tseytlin, V.B. 1613
Tsimring, L.Sh. 1881
Tsonis, A.A. 136, 735, 1905
Tsubota, Hiroyuki 1354
Tsuchiya, Mizuki 677
Tsukamoto, Osamu 2519
Tsunogai, S. 1791
Tsunogai, Shizuo 197, 1332, 1349, 1357
Tsvetkov, A.A. 393, 1506, 1507
Tsyban, A.V. 1657
Tsybaneva, T.B. 1182
Tuck, A.F. 1255
Tuncel, G. 1997
Turner, G.L'E. 1743
Turner, J. 700
Turner, J.T. 2231
Turner, John 1843
Turner, R.E. 261
Turner, S.J. 3172
Turrell, W.R. 1725
Turturici, L. 1724
Tushingham, A.M. 858
Twichell, D.C. 1406
Twomey, S. 772
Tyack, P.L. 965
Tyack, Peter 2701
Tyburski, S.A. 840
Tziperman, Eli 1790

Ueda, Hiromasa 754
Ueha, S. 68
Uehara, Katsuto 38
Ugarte, R. 984
Ugolini, A. 2822
Uitto, Anna 2290
Ujiie, Hiroshi 2611
Ulanowicz, R.E. 918
Ulmishek, G.F. 2657
Underhill, J.R. 3137
Underwood, A.J. 598, 997, 2831
University Corporation for Atmospheric Research, 610
Uye, S. 2293

v. Bodungen, Bodo 3027
Vainshtein, M.B. 1323
Valdes, J.R. 1054
Valentine, J.F. 3173
Valentyuk, R.A. 119
Valiela, Ivan 959
Valkirs, A.O. 3219
Vallier, T.L. 1508
Vallis, G.K. 727, 1794
Valyaev, A.B. 1873
Van Aartsen, J.J. 2718
Van Aken, H.M. 20
van Andel, T.H. 356
van Boekel, W.H.M. 1617
Van Buren, A.L. 103
van de Berg, Leo 1898
van den Berg, C.M.G. 1313, 2562
Van der Gaast, Sjerry 3028
van der Hilst, Rob 1559
van der Kaars, W.A. 1441
van der Meer, J.W. 584
van der Meeren, T. 1607
Van der Merwe, Debbie 1094
Van der Merwe, Deon 1094
van der Sloot, H.A. 803, 2557
van der Spoel, S. 2795
van der Veen, C.J. 1210
van der Veer, H.W. 1623
van de Wetering, Ben 1074
Van Dover, C.L. 1741
Vaněk, J. 888
Vanek, Vladimir 3067
van Geen, Alexander 797
van Gemerden, Hans 2262
Van Gorder, Stephen 1133
Vankat, J.L. 1583
van Montfrans, Jacques 2823
Vanney, J.-R. 1067
van Os, B.J.H. 2074
Van Scoy, K.A. 647, 1137
Vant, W.N. 1215
Van Wagoner, N.A. 1501, 1560
Vanyan, L.L. 2462
Vanyo, J.P. 317
van Zyl, P. 2715
Varentsov, I.M. 913, 2194
Varley, Allen 578, 581
Varnavas, S.P. 1415
Varol, Osman 3088
Vascotto, G.L. 1051
Vashchilov, Yu.Ya. 2171
Vasilenko, N.F. 2141
Vasilinenko, N.I. 1842
Vasil'kov, A.P. 1260
Vassilopoulou, V. 549
Vaughan, R.A. 1213
Veldhuizen-Tsoerkan, M.B. 2336
Velimirov, Branko 2869
Venkateswaran, Kasthuri 3220
Venrick, E.L. 954
Venugopal, P. 2569
Vergnaud Grazzini, C. 1455
Vergnaud Grazzini, Colette 2083
Verheye, H.M. 2230, 2697, 2798
Verhoeff, J. 2118
Verity, P.G. 1618
Vermeer, G.J.O. 2009
Vermeij, G.J. 920, 2112, 2206
Verron, J. 21
Verron, Jacques 2897
Verzhbitskiy, Ye.V. 1561
Vethanayagam, R.R. 1666
Vetrano, A. 120
Vezzoli, Luigina 2075
Vianna, M.L. 611
Vidal, Ph. 2656
Vidale, J.E. 1523
Viel, Monique 1975
Vietinghoff, Ulrich 3236
Vigliotti, L. 429
Vihma, Timo 1917
Vila, J.-M. 2128
Vilas, Federico 262
Vilas, J.F. 2139
Viličić, Damir 3161
Villareal, T.A. 2312
Villate, Fernando 456
Villbrandt, M. 2775
Vincent, D.G. 2528
Vincent, P. 2776
Vincenzi, S. 347
Vincx, Magda 2268, 2713
Vink, S. 3030
Vinogradov, G.M. 520
Vinogradov, M.Ye. 1619, 2232
Vismann, Bent 2207
Visscher, P.T. 2262
Visser, A.W. 2941
Visser, M. 790
Visser, P.J. 1814
Vistelius, A.B. 2010
Vitousek, P.M. 1976
Vizakat, Lathika 2716
Vladimirov, V.L. 1980
Vlasov, D.V. 1761
Vogelbein, W.K. 1625
Vogt, P.R. 263, 2011
Voipio, Aarno 783
Voisin, Bruno 2454
Volkman, J.K. 3029
Vølstad, J.H. 430
Vol'tsinger, N.Ye. 2029
Volynets, O.N. 394, 1507
Volynskiy, V.A. 1216
von Bodungen, Bodo 2208, 2221
von der Borch, C.C. 1394
von Frese, R.R.B. 337
Vongvisessomjai, Suphat 45
von Huene, Roland 1494
Vonk, Ronald 2824
von Stackelberg, Ulrich 3143
Voordouw, Gerrit 2263
Voronov, D.A. 2849
Voropayev, S.I. 1876
Vorren, T.O. 3076
Voss, David 2349
Voss, Maren 2233
Voss-Foucart, M.F. 1668, 1669
Voytov, V.I. 1767
Vukovich, F.M. 22, 1282

Wachendörfer, V. 2777
Waddell, Evans 22
Waddington, E.D. 1201
Wade, T.L. 3221
Wadhams, P. 1211
Wagner, G.S. 408
Wagner, H.P. 3194
Wagner, S.E. 259
Wahl, D.D. 2416
Wahlen, M. 1297
Wai, M.M.-K. 1930
Wainright, S.C. 2212
Waite, M.E. 3250
Wajsowicz, R.C. 1887
Wakata, Y. 1918
Wakeham, S.G. 3029
Wakker, K.F. 623
Waldron, H.N. 2572
Walenkamp, J.H.C. 3182
Walin, Gösta 1350
Walker, D.A. 718, 1721
Walker, D.R. 2685
Walker, T.A. 1095
Wallin, Mats 1729
Walsh, E.J. 2407
Walsh, J.E. 748
Walsh, J.J. 1328
Walsh, T.W. 3030
Walstad, L.J. 651, 661, 665
Walters, D.A. 2368
Waltman, P. 2737
Wang, Bingxiang 67
Wang, C.-Y. 2603
Wang, Hsiang 1824
Wang, Jia 1198
Wang, Jingyong 52
Wang, Joe 24, 39
Wang, N. 68
Wang, Pinxian 2619
Wang, T. 232
Wang, Weiqiang 2564
Wang, Yuheng 186
Wang, Zhaozheng 155
Wängberg, S.A. 3199
Wanink, J.H. 1647
Wanless, H.R. 1383
Ward, S.N. 3130
Wardlaw, B.R. 2102
Warén, Anders 998
Warneke-Cremer, Cornelia 3195
Warner, A.J. 909
Warner, T.T. 1922
Warnke, D.A. 2095
Warren, B.A. 12, 27, 648
Washburn, Libe 720, 940, 1114
Wasilewski, P. 343
Wasmund, Norbert 3162
Wassmann, Paul 3031
Watanabe, S. 1791
Watanabe, Y.W. 1791
Waters, R.D. 1730
Watkins, M.M. 1080
Watkins, W.A. 2701
Watling, Les 2825, 2826
Watson, M.D. 2277
Watson, Sarah 395
Watts, R.G. 742
Waugh, D.W. 2485
Wayne, R.P. 1298
Wdowinski, Shimon 373
Weatherly, J.W. 748
Weaver, A.J. 1792, 1793, 1800
Weaver, B.L. 1509
Webb, D.G. 985
Webb, D.J. 685, 2402
Webb, F.H. 1359
Webb, S.C. 1517
Webber, W.R. 2804
Weber, S.L. 2446
Weber, W.S. 2142
Webster, P.J. 1897
Weeks, W.F. 3237
Wefer, G. 3001
Wefer, Gerold 2113
Wei, Wuchang 844, 2620
Weidel, H. 2198
Weigelt, Michael 204
Weil, Ernesto 1035
Weimer, Paul 845
Weinberg, J.R. 1018
Weisse, Thomas 3222
Weissert, Helmut 2043
Welander, Pierre 1269
Weller, G. 3237

Wells, J.T. 1416
Wells, M.L. 1316, 1342, 2563
Wells, R.E. 1481
Wen, T. 1219
Weng, H.-Y. 2945
Wentz, F.J. 1923
Werby, M.F. 2465
Werner, Marian 1055
Werner, P.C. 1252
Wesnigk, J.B. 2778
Westbroek, Peter 2835
Wester, Peter 2316
Westerlund, Stig 776
Westphal, Helmut 3236
Wetzel, Andreas 852
Wetzel, R.L. 2723
Weyland, H. 2779
Weyres, B. 151
Wheatcroft, R.A. 2041
Wheeler, C.W. 1378
Wheeler, S.J. 300
Whillans, I.M. 2456
White, A. 1462
White, A.B. 1899
White, A.T. 2877
White, W.B. 2956
Whitehead, J.A. 123
Whitehouse, I.A. 1145
Whitfield, M. 2574
Whitledge, T.E. 2675
Whitmarsh, R.B. 2178
Whitten, G.Z. 160
Whitworth, T. III 666
Wibdom, B. 2706
Wicks, C.W. Jr. 2179
Wicks, R.J. 1970, 2308
Widdows, John 3212
Wiegert, R.G. 2806
Wiencke, C. 2306
Wiens, D.A. 2183
Wilcock, W.S.D. 123, 2180
Wildish, D.J. 2803
Wilheit, T.T. 1289
Wilkens, R.H. 2181
Wilkins, George 1063
Wilkins, Roy 2862
Wilkinson, D.L. 1837
Wilkinson, J.F.G. 3111
Willebrand, Jürgen 637, 1781
Willemann, R.J. 1562
Willemsen, J.F. 99
Willey, J.D. 2234
Williams, A.B. 2294
Williams, A.J. III 1077, 1162
Williams, D. 726
Williams, E.H. Jr. 618
Williams, G.A. 2717
Williams, G.E. 1407
Williams, P.J. LeB. 1620 2556
Williams, R.B. 2796, 2797
Williams, Richard 1193
Williams, S.N. 875
Williams, T.A. 1426
Williams, Ted 1738
Williams, W.T. 484
Williamson, D.L. 135
Williamson, David 2119
Willmott, A.J. 124
Wilson, E.O. 1121
Wilson, G.S. 2863
Wilson, R.E. 654
Wilson, R.P. 487, 2870
Winant, C.D. 1915
Windom, H.L. 3032
Windsor, E.P.L. 1064
Winebrenner, D.P. 1192
Winn, K. 1263
Winter, Amos 1379
Winter, P.E.D. 787
Witherington, B.E. 462
Woittiez, J.R.W. 2557
Wolanski, E. 2942
Wolcott, T.G. 2820
Wolf, K.-U. 3163
Wolfe, D.A. 1731
Wolfe, J.A. 323
Wolgin, W.M. 2960
Wong, E.C.K. 986
Wong, G.T.F. 777
Wong, K.-C. 23, 125
Wong-Chang, I. 1659
Wong Chang, I. 2324
Woodbury, M.M. 530
Woodcock, F. 156
Woodgate-Jones, M.E. 659, 1131
Woods, J.D. 2898
Woodward, E.M.S. 614
Woodworth, P.L. 47, 649
Woodworth-Lynas, C.M.T. 2042
Wooldridge, T.H. 1006
Woolf, D.K. 1965
Woollett, R.W. 1364
Wootton, J.T. 2253
Worcester, P.F. 719
Worrall, D.M. 866
Worsley, T.R. 2612
Wright, D.A. 2337, 2871
Wright, D.G. 17
Wright, J.D. 732
Wu, Chaoyu 1371
Wu, Guoping 1442
Wu, Jianguo 1583
Wu, Jin 1877
Wu, Lichen 3068
Wu, T.Y.-T. 2913
Wübber, Chresten 1772
Wuertz, S. 811, 1711
Wunsch, Carl 628, 650, 749
Wunsch, Marita 3027
Wyatt, F.K. 390
Wyatt, L.R. 69
Wyland, R.M. 70
Wylie, Donald 2537
Wylie, J.L. 1621
Wyrwoll, K.-H. 2022
Wyss, Max 906, 907

Xhoffer, Chris 773
Xia, Zongfeng 569
Xian, Zejin 1287
Xie, Pingping 152
Xiqing, Chen 48
Xu, Dongyu 428
Xu, Jinshu 288
Xu, Lisheng 153
Xu, Peng 34
Xue, Shengji 3077

Yagi, Hiroshi 2028
Yakushev, Ye.V. 1981
Yamagata, T. 1914
Yamaguchi, D.K. 308
Yamamoto, Takahiro 396
Yamamoto, Tokuo 102
Yamato, Shigeyuki 2295
Yamazaki, Hideo 1314
Yamazaki, Toshitsugu 2624
Yan, Jun 3077
Yan, X.-H. 2417
Yanada, Mitsuru 1329
Yang, Dasheng 146
Yang, H.-S. 2408
Yang, Jianming 264
Yang, Jiayan 2409
Yang, Tianhong 34
Yang, Yubiao 397
Yaroshevich, M.I. 1283
Yaroshevskiy, A.A. 1510
Yastrebov, V.S. 1767
Yasuda, M.K. 1442
Yasunari, Tetsuzo 1270
Yavari, B. 1225
Yeats, P.A. 1343, 3014, 3033
Yefimov, S.S. 1813
Yefimov, V.V. 1959
Yeh, H.H. 692, 2917
Yen, M.-C. 147
Yengalychev, M.Yu. 1234
Yeremeyev, V.I. 1148
Yeremeyev, V.N. 1894
Yeremin, G.D. 2120
Yermakov, V.A. 2182
Yerofeyev, A.Yu. 1888
Yerushchenkov, A.I. 1934
Yetiş, Ü. 1997
Yi, Zengxin 689, 1166
Yin, Y.-C. 3087
Yiou, P. 2508
Yoder, J.A. 3256
Yoerger, D.R. 1078
Yokoyama, R. 2393
Yomogida, Kiyoshi 1529
Yonekura, Nobuyuki 864
Yoo, S.J. 2687
Yoon, S.H. 1408
Yoshida, Tadao 537
Yoshinaga, I. 2264
You, Z.-J. 1837
Young, J.A. 771
Young, J.R. 2835
Young, P.S. 2296
Young, R.W. 955
Young, S.W. 1146
Young, W.R. 1801
Yu, H.-P. 2275
Yu, H.-S. 241
Yu, Lisan 2409
Yun, K.H. 2694
Yund, P.O. 3146
Yunov, A.Yu. 2172
Yurganov, L.N. 2549

Zabanbark, A. 423
Zachariasen, F. 716
Zahel, Wilfried 2428
Zaikin, A.N. 1584
Zaitseva, L.V. 913
Zakarauskas, Pierre 104, 2472
Zakin, Willa 619
Zalesak, J.F. 2470
Zamuda, C.D. 2337
Zana, Ndontoni 2159
Zandbergen, R.C.A. 623
Zaslavskiy, M.M. 71
Zatsepin, A.G. 1234
Zawadzki, Ireneusz 1889
Zazueta-Padilla, H.M. 1043
Zdanowicz, V.S. 1356
Zebühr, Yngve 1947
Zecchetto, S. 752
Zehr, Jonathan 1656
Zeidler, Wolfgang 2297
Zenetos, Argyro 2718
Zeng, Qing-cun 1908
Zenk, Walter 678, 1867
Zeringue, J. 1611
Zetler, B.D. 682
Zhang, De'er 2952
Zhang, Guangwei 3048
Zhang, Huaicheng 191
Zhang, Jiajun 2637
Zhang, Jun 2447
Zhang, Keke 730
Zhang, Qingrong 7, 155
Zhang, X.-z. 1874
Zhang, Xiuzhang 1164
Zhang, Zhuangyu 301
Zhao, Baoren 2418
Zhao, Dapeng 422
Zhao, Junsheng 2455
Zhao, Kesheng 33
Zhao, Liying 177, 570, 571, 596
Zhao, Quanhong 2619
Zhao, Quanji 301
Zhao, Songling 2599
Zheng, Jiancheng 2564
Zheng, Xiaoyun 264
Zhitkovskiy, Yu.Yu. 105
Zhmur, V.V. 1895
Zhong, Shiyuan 755
Zhou,J.-x. 1874
Zhou, Lei 324
Zhou, Qiang 2946
Zhou, Xianchu 714
Zhu, Anning 2183
Zhu, Hanmin 1322
Zhu, Xionghua 325
Zhu, Yafen 146
Zhurbas, V.M. 1235
Zieger, A.R. 1065
Ziegler, A.M. 3258
Ziemann, D.A. 457
Zimmermann, P.H. 1294
Zimov, S.A. 1935
Zingmark, R.G. 2310
Zippi, P.A. 3082
Zlobin, T.K. 2182
Zmudziński, Ludwik 3223
Zoback, M.D. 2184
Zonenshain, L. 3095
Zonenshayn, L.P. 374
Zonta, R. 347
Zou, Jing-meng 2495
Zündorf, Ilse 2836
Zuo, Zhizheng 3056
Zverev, A.T. 2185
Zwally, H.J. 748
Zwarts, Leo 1647

Subject Index
(Notes)

General principles. A small number of very specific access terms (with accompanying non-searchable modifiers) is assigned to each document. The terms, drawn from the title or text, are rotated to generate the index entries.

A major emphasis is on proper geographic or physiographic names (e.g., Antarctic Bottom Water, Nares Abyssal Plain, Tyrrhenian Sea). Nearshore studies peculiar to one region might only be accessible under a country or continent name, although the name would then carry modifiers for more complete geographic and topical information. Additional spatial, zonal or environmental locators are frequently assigned to a document. Examples might include the terms mixed layer, troposphere, estuaries, fracture zones, and terms beginning with bottom-, surface-, or littoral-.

Another emphasis, when practicable, is on access terms that represent concrete, tangible or directly perceivable entities. Thus, phytoplankton might be assigned in preference to primary production, or seawater in preference to transparency, or sediments in preference to grain size. The less concrete words are freely used as modifiers, and they will frequently occur in the index as gathering points, or nodes, for cross-references to more specific terms, but generally will not collect many documents themselves, unless they are central to the paper's topic. In general, all processes (e.g., diagenesis), measured or calculated quantities (e.g., production), concepts (e.g., Evolution) and other abstractions are used as access terms only when they are the subject of a universal discussion rather than subsidiary to regional or other more concrete considerations.

A few non-English terms (Massif Central, gelbstoff) will occur in the index if thought to be appropriate.

Hierarchies. Only limited hierarchies have been constructed. Thus, a document on the Tyrrhenian Sea is not necessarily accessible under the Mediterranean Sea, nor a document concerned with the Tertiary period accessible under Cenozoic. But oceanic features (including bottom features) are built up to at least the name of a specific sea or gulf. Shallow water areas are built up through a terrestrial hierarchy to the name of a country (for the U.S. and Canada to the name of a state or province), or occasionally to the name of a major nearshore water body such as Mid-Atlantic Bight or Chesapeake Bay. Islands are built up to the name of an island group or the name of the surrounding water body in the case of isolated islands. Geological periods and markers are built up to at least the name of an epoch, but events as old as the Precambrian are always accessible under that term. Specific cases are sometimes made accessible as general cases; for example, a document on the Kuroshio would also be generically accessible under the term currents provided that, for the paper in question, the Kuroshio was used to exemplify a more universal aspect of currents. Certain hierarchies, particularly taxonomic, may occur coincidentally because they are part of an original title; otherwise an attempt is made to build up the taxon in a title by one or two levels.

Cross-references. There is a cross-reference structure for many of the general terms. Cross-references that follow the phrase "see also" tend to be narrower terms, synonyms or near-synonyms. Cross-references that follow the phrase "more at" tend to be broader or more distantly related terms. A cross-reference which appears in capital letters contains either another list of cross-references under it, or, a list of documents that might well be highly relevant to the search. This can be so because two-word terms are frequently filed in both normal (specific) and inverted (general) forms. For example, plate tectonics is filed as plate tectonics, to juxtapose it with other plate- terms, and also as tectonics: plate, to juxtapose it with other tectonics-terms. It is the term tectonics which will have the cross-references to, e.g., neotectonics, seafloor spreading and subduction. Because the cross-references are made somewhat independently of the documents in the collection, a user could occasionally look up a cross-reference to find that the only entry is a reference back to the starting place.

Search strategy. Given the above, the following general rules apply to search strategy: (1) Select concrete or tangible terms insofar as practicable. (2) Build an appropriate set of broader and narrower terms, particularly for proper geographic or physiographic names, geological time periods, taxa and their common name equivalents; for the general terms, a systematic foray through the cross-references at this point is likely to be more useful than is their happenstance utilization after a search has begun. (3) Select both terrestrial and oceanic geographic names for nearshore areas. Finally, the searcher interested in a large set of documents that, regardless of individually specific or general natures, applies to a broad concept like tides or sediments might better search the appropriate headings of the bibliography itself. Suggestions regarding the index will always be appreciated.

SUBJECT INDEX

to Oceanographic Literature Review,
1992, Vol. 39(1-6), pp. 1-532
citations 92:0001-92:3262

Note that the leading numerals '92' are omitted from the access numbers. Also note, if doing multi-year searches, that through Volume 36 annual cumulative indexes were published. In Volume 37 there are four quarterly non-cumulative indexes to search; from Volume 38 forward, two semiannual non-cumulative indexes are provided.

Abra
alba; Bivalvia, utilization by; Polychaeta, utilization by; Eupolymnia, nebulosa; fumigated sediments 973
absorption
isotherm equations; suspended matter, sorption capacity ... 1338
abyssal basins
bottom topography; spinup; circulation 1774
Hawaii, SE of; North Pacific; geophysical studies 2654
abyssal circulation
Mid-Atlantic Ridge, eastward flow through, at 11N 1131
abyssal communities
fossil record, trace fossils; ecologic interpretations 852
sediment; North Atlantic, NE; Rhizopoda; Xenophyophoria, 7 taxa 1015
abyssal flow
Samoa Passage, into; Pacific; deep circulation 675
abyssal gyres
North Atlantic; Antarctic Bottom Water, flow 1133
abyssal hills
morphology; global and regional stochastic analysis 3045
abyssal ocean
electrical field, Schumann resonances 82
abyssal sediments
Atlantic, Madeira Abyssal Plain; manganese nodules; mechanism of surface retention of nodules during sedimentation changes 427
abyssal zone
Black Sea; hydrogen sulfide, balance 1323
Abyssotherma
pacifica, structure and biology; East Pacific Rise; Foraminifera 1688
Acanthaspidiidae
Isopoda; revision 1001
Acanthaster
planci, outbreaks; are they novel events?; Scleractinia; Echinodermata; coral communities; predation, massive 2241
planci, by; corals, massive, 2 spp.; predation, effects of 2709
Acari
North Atlantic; Halacaridae, identification 2780
Acartia
tonsa; Calanoida, in heterogeneous environment; Eurytemora, affinis; competition; coexistence, predator-mediated 2280
accretion: crustal
Mariana Arc, forearc; North Pacific, W; tectonics 839
accretion tectonics
continents, growth; margin, dynamics, terranes; ACCRETE workshop steering committee reports 360
subduction zones, oblique, lateral displacements in; coastwise transport reconsidered 1486
active margins; subduction 1494
Southeast Indian Ridge; periodicity in the accretion process 2129
accretionary tectonics
continents; symposium papers 3095
accretionary terranes
Barbados, evolution; Caribbean Sea; tectonics; hydrocarbons, evolution 912
accretionary wedges
water flow in; Barbados; correction 286
New Hebrides Arc, (Vanuatu); South Pacific, W; guyots, Bougainville Guyot; collision tectonics; structure of the arc-guyot collision zone 2123
Barbados, and Oregon; fluid flow, and pore pressure 2603
accuracy
quantification analysis; Australia; environmental impact, predictions 1084
acetates
concentrations; pore water 2555
acetylene reduction (More at NITROGEN CYCLE ...)
acids
stress; zooplankton, littoral, responses; aluminum, stress; laboratory bioassays 1036
acoustic<s> (More at SOUND ...)
acoustic backscattering
surface, rough, excited from above and below 83
North Pacific, 2 sites; angular dependence 87
fish, number density, determinations via statistical analysis ... 88
Doppler; gravity waves, surface 99
suspended sediments, concentrations 215
ADCP; zooplankton, abundance 443
acoustic microscopy (More at MICROSCOPY ...)
acoustic pingers (More at PINGERS ...)
acoustic profilers (More at PROFILERS ...)
acoustic scattering
bubble plumes 93
bubbles, clouds, from 100
directional modal scattering by a ridge 710
surface, from; spatial covariance and adaptive beamforming .. 1220
angular distributions, from flexural and Rayleigh resonances ... 2465
from cylindrical elastic objects 2471
acoustic surveys (More at SURVEYS ...)
acoustic telemetry (More at TELEMETRY ...)
16 papers 86
acoustic tomography
ocean; U.S. report to IUGG 719
acoustic waveguides
surface, layer; transmission techniques 84
trapped modes 705
scattering matrix and boundary integral equation methods for long-range propagation 706
perturbation approach to theory in case of layered bottom 1858
sound field, interference structure; random medium influence 1861
sediment layer; sound channels, parameters 1862

sound scattering; boundary integral equation methods 2463
sound scattering; Rayleigh-Fourier and extinction theorem methods compared 2468
acoustic waves (More at WAVES ...)
travel times; Indian Ocean, S; Heard Island, Experiment; global warming, attempts to measure; lecture by Walter Munk 715
time domain analysis of normal mode, parabolic and ray solutions of the wave equation 1217
refracted field; response of a directional array 1857
attenuation; sound channels, inhomogeneities 1873
Acoustically Navigated Geological Under-Sea Surveyor (Use ANGUS)
acoustics
space-time processing of environmental-acoustic effects 85
range and Doppler information from fourth-order spectra 89
sonar, passive; receiver depth selection 90
echo sounder data; signal processing, postprocessing system 91
scattering; echo sounders, quantitative, design of 92
fluid-solid interface, rough; sound, transmission; identity of the Rayleigh-Fourier and extinction theorem method solutions 94
hydrophone arrays, flush-mounted, response to Corcos turbulent wall pressure spectrum 95
fields; lenses, intrathermocline; eddies; interactions, effects .. 96
generalized impedance method for application of the parabolic approximation 97
noise, field, laterally-coherent mesostructures 98
variability of shallow-water bistatic bottom backscattering 101
speed profile results; sediments, shear modulus; gravity wave inversion technique 102
Arctic Ocean; noise, ambient; automatic extraction of springtime transients 104
sound scattering; parametric sonar investigations 105
calculation of the Green's function for the wedge-shaped layer . 704
propagation over a slope; scattering matrix and boundary integral equation methods 707
active sonar; icebergs 708
scintillations, spatial filtering of; remote sensing; flow, ocean; observations 709
identification of the ocean transfer function; Tyrrhenian Sea; note 711
Beaufort Sea; sound, underwater, measurements; offshore platforms, drilling, from 712
Brillouin scattering; sound, velocity in water; aircraft laser sensing 713
islands; seamounts; sound, refraction 716
sound, propagation underwater; implementation of the parabolic equation 717
a search for signals; North Pacific; Axial Seamount, June 1988; temperature, anomalies 718
sampling volume 1218
reflections; Arctic Ocean; sea ice, from 1219
noise, emissions returned by a wavy surface, correlation 1221
ray parameters; Bengal; Bay of 1222
signals; noise, ambient; interactions 1223
noise, ambient, coherent and diffusive fields 1224
comparison of numerical calculations of two Biot coefficients with analytical solutions 1225
vorticity; turbulence; fluid dynamics; flow, incompressible fluids 1245
sound scattering; sediments; manganese nodules 1569
sound reverberations; long-range, from the surface 1851
sonar, towed multi-beam 1852
sound, vertical speed profiles; convection, thermal, effect of . 1853
accuracy and efficiency of finite-difference models for unidirectional equations 1854
sound, attenuation in sediments 1855
sound, dispersion in a porous bottom 1859
point source in moving medium; sound field, spectrum properties 1860
sound scattering; current jets, particle-laden, from 1863
local source; noise, ambient; interaction of power flows 1864
normal-mode matching localization in shallow water; environmental and system effects 1865
sound field, of source; air-water interface, presence 1866
sound field, oceanic sources; instrumentation, underwater recorder as navigation aid for RAFOS floats 1867
structure of directional gain of a vertical line array 1868
breaking waves; sound, generated by 1869
sonar, parametric; echo spectroscopy; sediments 1870
signal amplitude fluctuations; classifying water and surface rays 1871
source localization; neural networks, approach 1872
resonant interactions in the coastal zone; sound waves; internal solitons 1874
radiation from a submerged thermoacoustic source 2464
adiabatic mode interpretation; Australia, Perth, from; Bermuda, to; sound, propagation 2466
resonances; waves, Scholte-Stonely, related to 2467
towed arrays; high-resolution wavenumber frequency methods . 2469
free-field calibration of arrays in a closed chamber 2470
neural networks; signal processing 2472
a 2-D downslope propagation model based on coupled wedge modes 2473
limitations on towed-array gain imposed by a nonisotropic ocean 2475
and seismic propagation; seafloor, rough 2587
constant-Q absorption properties; seabed, subbottom 2937
applications to source-array and streamer tow-point positioning 2938
Cramer-Rao bound for location systems in multipath environments 2939
actinides (More at ELEMENTS ...)
active margins
subduction; accretion tectonics 1494
Aden: Gulf of
East African Rift, System, Afro-Arabian Rift; Dead Sea Rift; Red Sea Rift; continental rifts; overview 3086
Mid-Oligocene; Oligocene; Red Sea, S, Late Oligocene; rifting 3088
Red Sea; plankton, all sizes, standing stock and metabolism; in German, English abstract 3160
deep; Calanoida; Pterochirella, tuerkayi n.gen., n.sp. 3193
adenosine diphosphate (Use ADP)
adenosine monophosphate (Use AMP)
adenosine triphosphatase (Use ATPase)
adenosine triphosphate (Use ATP)
Adriatic Sea
region; waves, body, velocities; crust 407
N; seaweeds; trace metals 559
Trieste: Gulf of; geochemical surveys 1390
Trieste: Gulf of; sediments, marine geology 1400
N; sea level, time variations, effects; storm surges, extreme . 1833
N; phytoplankton, vertical distribution; analytical model calculations 2220
bacterioplankton, distribution; red tides, during 2747
N; eutrophication, long-term effects; macrofaunal communities 2840
N; chlorinated hydrocarbons; biota, mussels, levels in ... 2844
N; nutrients, supply, controlling mechanism; phytoplankton 2983
E, long-term trends; coastal sediments; organochlorines; DDT; PCBs 3041
July 1984; phytoplankton blooms 3161
Gdansk Deep; macrozoobenthos, long-term changes; benthic communities 3223
advection (More at FLUID DYNAMICS ...)
numerical schemes; circulation modelling; influence on GCM results 637
large-scale, effects; Benguela Current, ecosystem; gelatinous zooplankton 2222
Aegean Sea
N; earthquakes, large, source parameters 408
S; crust; seismicity 417
Mediterranean area; tectonics, active; subduction 865
Milos island; radioactivity, natural, in environmental samples 1318
Hellenic Arc; hydrothermalism; metallogenesis, processes; volcanic arcs 1415
seismic tomography; resolving power of images 2004
Cyclades Plateau; benthic communities; analysis 2718
benthos, flora and fauna; heavy metals; baseline 3204
Aeolian Island
Italy; volcanic gases, submarine exhalations; geochemical investigations 385
aerial survey<s> (More at SURVEYS ...)
aerosols (See also droplets, drops, dust, fog, spray, volcanic emissions ...)
marine; clouds, models; particles, scavenging 161
marine, concentrations; dimethylsulfide, effects of; marine boundary layer 770
sea-salt; organic matter, marine, effects of; bursting bubbles 1944
aerosols: atmospheric
radioactive; El Niño, occurrences; seasonal maxima in concentration 163

importance; climate; overview 740
clouds; radiance; interactions, climate modelling implications 772
North Sea; English Channel; particles, chemistry, source . 773
global climate, effects on; symposium; 24 papers 774
World Ocean, over; sulfates, non-sea-salt, and methanesulfonic acid 1301
methanesulfonate; cloud condensation nuclei; seasonal relationship 1943
South Atlantic, over; particulates; lipids, terrestrial 1946
clouds; remote sensing, NOAA/NESDIS 2536
Indian Ocean, distributions over; trace metals, particulate . 2551

aerosols: sulfate
natural marine; dimethylsulfide, from phytoplankton; geophysiology 768
Pacific, over; atmospheric particulates 2550
Pacific, over; geographic, temporal variations 2552

Afar
depression; Djibouti Republic; mantle, sources, changes in; volcanism; rifts, evolution 2656

Africa
NW and E margins; Quaternary; continental environments; margin sediments, recorded by 311
off; Cretaceous; Tertiary; basin sediments; continental environments 319
NW, off; Quaternary, Latest; upwelling, variability; fossil record, diatom evidence 1417
absolute motion during the past 30 myr; plate motions; two-stage model 1493
West, off (20-38°N); Atlantic, E tropical; magnetic field, anomalies 2118
East; Quaternary, Late; Lake Tanganyika; sediments; paleomagnetism, oscillations, chronological potential ... 2119
SW coast; Cnidaria; Hydromedusae, 4 n.spp. 2266
southern, around; circulation, FRAM model applications ... 2402
East; East African Rift, System; continental rifts; crust, beneath; asthenosphere, intrusions 2888

aggregates: fractal
in geophysics; particle flocs 1760

aggregates: particle
large amorphous; Japan; Osaka Bay; nature and distribution 1331

aggression
discriminatory, evolution of; invertebrates, marine 2267

agronomy (See also AQUACULTURE ...)

Agulhas Bank
SE of; South Africa; crust, susceptibility, Koenigsberger ratio; magnetic field, reversals 403

Agulhas Retroflection
and Subtropical Convergence; South Africa, off; Cetacea, sightings 2699

air (See also aerobic, anaerobic, deaeration; more at ATMOSPHERE, LIGHT, SOUND ...)
marine, composition; North Pacific, NE, off U.S. coast; atmosphere 160

air bubbles
fluid dynamics; release from an underwater nozzle 1244

air flow
topography, complex, over; turbulence, closure schemes; mesoscale planetary boundary layer numerical model simulations, cold air outbreaks 762

air masses
modification, modelling, forecasting, measurements; Mexico; Gulf of, over; air-sea interactions 617

air temperature (More at TEMPERATURE ...)
surface; Northern Hemisphere; observed records compared 735
seasonal; Antarctica, around; sea ice, variations; relationships 748
atmospheric monitoring; remote sensing; microwave temperature sounders compared 2492

air turbulence
wind gusts, over-water 751

aircraft (See also helicopters ...)
Antarctica; Pygoscelis, adeliae; humans; penguins, Adelie, effects on 2870

aircraft instrumentation
Long Island Sound; gravity field, measurements 2114

airguns
bubbleless; seismology 2007

Air-Mass Transformation Experiment (Use AMTEX)

air-sea interactions (See also ocean-atmosphere- and wind-wave interactions; more at ATMOSPHERE, OCEAN ...)
ice-ocean interactions, and air-; atmosphere, conditions; satellite imagery; legacy of the Seasat mission 140
Mexico: Gulf of, over; air masses, modification, modelling, forecasting, measurements 617
fluxes; North Atlantic; Beaufort scale, equivalent; wind statistics, effects on 1253
baroclinic instability; heat exchange 1273
heat flux, turbulent and net; radiation flux; clouds; modelled relationships 1901
Pacific, W tropical; surface temperature; circulation, general; large-scale interannual and intraseasonal interactions 1912
Greenland Sea; temperature fronts, marine 1917
Arabian Sea; monsoon circulation, onset; budget and sensitivity studies 1920
South Pacific; carbon dioxide, exchange; seasonal fluxes .. 2513
Arabian Sea, from; methane flux; atmosphere, to 2514
Arabian Sea, variability in thermal response; monsoons, response to forcing by; circulation; heat flux 2515
Bengal; Bay of, N; monsoons, summer; currents, variability 2516
surface; wind; stability dependence of the drag and bulk transfer coefficients 2519
Pacific, E, tropical perturbations; precipitation, field over NW Mexico; El Niño; relationships 2959

air-sea interface (More at INTERFACES ...)
El Niño, 1983; heat exchange, analysis of 146
carbon dioxide, production; surface microlayer; in French, English abstract 198
Pacific, W equatorial; carbon dioxide, exchange; in Chinese, English abstract 199
carbon dioxide, transport, fluxes; effect of coupling of heat and matter fluxes 746
Baltic Sea, and adjacent regions; oxygen, fluxes; organic matter, net production 781
gas exchange, in near-saturation conditions; bubbles, role .. 1965
Australia, Sydney; organic matter, characterization; water column, subsurface; sediments; sewage outfalls 1972
mercury flux, modelled 1986
heat flux, turbulent, and moisture and buoyancy; wind, low speeds; surface, fluxes 2954

air-water interface
surfactants, as coating; moisture, distribution above 1283
presence; acoustics; sound field, of source 1866
Ciliata, hypotrichous; Oxytricha, bifaria 3196

Alaska
Auke Bay; phytoplankton blooms; interannual variability 457
Amphipoda; Amatiguakius, forsberghi n.gen., n.sp. 509
SE; Mesozoic, Mid, the Gravina sequence; arc tectonics ... 900
Barrow, near; sea ice, nearshore, movements; seabed, ice gouges; correlation 1209
Aleutian Range, Katmai; explosive volcanism; drilling project investigations, collection 1497
S, beneath; seismic tomography; subducting slabs, Pacific 1534
Prince William Sound; oil spills; bioremediation, efforts, results of; Exxon Valdez 1726
Prince William Sound; oil spills; Exxon Valdez; bioremediation, and other strategies; situation update 1727
SE; Canada; British Columbia, NW; geophysics; geology; symposium 2012
SE; sedimentation, ice-proximal, rates; glacial fjords 2051
Glacier Bay; sediments, laminated; fjords, seafloor prodeltaic deposits 2065
Sitka Sound, from; British Columbia, Atlin Lake, to; continent-ocean transitions; crust; northern Cordilleran transect 2152
Prince William Sound; bioremediation, effects; mutagenicity, on; oil spills; Exxon Valdez 2356
polar seas; ice; remote sensing 3237

Alaskan Gyre
role; water masses, North Pacific Intermediate Waters; basin ventilation 1137

albedo
parameterization; sea ice; climate modelling 1267

Alberta
(Canada); Cretaceous-Tertiary boundary; diamonds, nm-size; boundary sediments 835

Albian
Late, to Early Turonian; North Atlantic; Foraminifera; fossil record; paleoslope model 2618

Alboran Sea
productivity; deglaciation, during 1455
crust, structure 2170

Aleutian Arc
Andreanof Island; earthquakes, 1986, quiescence preceding; seismograph reporting history ... 906
geology, evolution; magmatism; tectonics ... 1506
algae (See also microalgae; kelps, seaweeds; more at FLORA ...)
Italy, S, Taranto; Mar Piccolo; reassessment ... 529
subtidal, encrusting; North Pacific, NE; San Juan Islands; distribution, thickness patterns ... 530
Mauritania, Banc d'Arguin; preliminary list ... 534
UV-absorbing substance, correlation with; stratospheric ozone, hole ... 536
marine, checklist (revised 1990); Japan; in Japanese ... 537
tropical, invasion by; Mediterranean Sea, NW; Caulerpa, taxifolia; in French, English abstract ... 1690
Qatar, coast; heavy metals ... 1702
Baltic Sea; benthic communities; eutrophication, influences ... 3209
algae: calcareous
xenobiotics, fate in ... 1038
algae: coralline
bacteria, associates; hypothesis for bacterial induction of invertebrate larvae ... 1654
rhodoliths, deep-water, distribution, productivity and growth history; carbonate nodules ... 1689
algae: epontic
Weddell Sea; photosynthesis, -irradiance relationships; carbon, metabolism ... 2680
algal blooms (More at PLANKTON ...)
algal colonization
Gastropoda; rocky shores; grazing, impacts ... 972
algal metabolism
DMSP; Antarctica; salinity, tolerance; temperature, tolerance; ecophysiological investigations; in German, English abstract ... 532
algal pigments
carotenoids; chlorophyll; chemical analysis ... 2978
algal sedimentation
response to; North Sea; nannoplankton; flagellates, nanno-, benthic heterotrophic ... 967
Algerian Current
application to; boundary currents, surface; lab study ... 2410
Algoa Bay
over; South Africa; surface wind ... 753
South Africa, Swartkops Estuary; phosphates, exchange ... 787
alkalinity (See also pH ...)
estuaries, and shallow seas; nutrients, concentrations; colloids, and HMW dissolved material, contributions ... 1974
surface distribution; East China Sea; Kuroshio; water masses, tracing, applications to ... 2564
anomaly technique; coral reefs; calcification; photosynthesis ... 3166
alkanes (More at HYDROCARBONS ...)
alluvial fans
submarine; coralliths, growth ... 243
Alpheidae
Caridea; contributions to knowledge of the family by Albert and Dora Banners summarized ... 1069
Australia; Potamalpheops, hanleyi n.sp. ... 2801
stygiophilic; Samoa, lava tube dwellers; Hamalpheus, acanthops n.gen., n.sp. ... 2802
Alps
western; Tyrrhenian Sea; ophiolites; crust ... 896
altimeter data
satellites, Geosat; improvements ... 3226
altimeters (More at REMOTE SENSING ...)
altimeters: radar
for the TOPEX/POSEIDON project ... 1065
altimetry: radar
waves, measurements; 1978-88 experimental results ... 683
waves, studies ... 686
waves; satellites, Seasat observations ... 693
surface, range measurements; frequency dependence of electromagnetic bias ... 2407
altimetry: satellite
Seasat; signal processing, and precise orbit computation ... 623
Seasat; circulation modelling; recent studies reviewed ... 642
dynamic topography; observations, Seasat ... 644
Seasat; dynamic topography, ocean; temporal variability, U.K. studies reviewed ... 649
ice sheets, mapping ... 701
geophysical applications; U.S. report to IUGG ... 816
Norwegian Sea; signal processing ... 1123
seamount topography; 3-D modelling ... 1362
gravity field, gradients ... 1468
seafloor mapping ... 2011
altruism (More at ECOLOGY ...)
aluminum
stress; zooplankton, littoral, responses; acids, stress; laboratory bioassays ... 1036
Alvin, Mid-Atlantic Ridge (Use AMAR area)
AMAR area (More at Mid-Atlantic Ridge)
AmasSeds
shelf sediments; 6 papers ... 240
Amatiguakius
forsberghi n.gen., n.sp.; Alaska; Amphipoda ... 509
Amazon Delta
outflow; river discharges; shelf sediments ... 2
Amazon River
and tributaries and estuary; metals, Ag, Cd, Pb ... 185
shelf; suspended sediments ... 214
shelf sediments; biogeochemical processes ... 216
river discharges; geochemical process occurring at the river-ocean boundary ... 218
shelf; shelf sediments; sedimentology, stratigraphy ... 296
shelf and delta; Brazil; shelf sediments; AmasSeds study ... 579
Amazon Shelf Sediment Study
shelf sediments; 6 papers ... 240
amino acid racemization
/epimerization, kinetics of; Mollusca; fossil record; shells, fossil and modern ... 2615
amino acids
DFAA and DCAA release; flagellates, bacterivorous ... 943
seleno-amino acid determinations; natural waters ... 1325
isotope dilution as tracer; carbon, sources; nitrogen, sources; bacterioplankton, in ... 1664
seawater; carbohydrates; chemical analysis; sample handling and analysis ... 2980
particulates; lipids; polysaccharides; extraction, analysis ... 3017
ammonification (More at NITROGEN CYCLE ...)
ammonium
sorption; sediments, aquatic; salinity, effect of; nutrients, implications for benthic cycling ... 210
subsurface maximum; Bengal: Bay of, N ... 786
regeneration; carbon, utilization; bacteria, by, grown on mixed substrates ... 989
ion ratios for isotope dilution experiments; seawater; HPLC determinations ... 1305
concentrations, determining; fluorescence, improved method; natural waters ... 1307
Amphipoda
gammarid; Iphimediidae, and similar families, revision ... 507
ochlesid; Magellan Strait; Curidia, magellanica n.sp. ... 508
Alaska; Amatiguakius, forsberghi n.gen., n.sp. ... 509
paramphithoid; Weddell Sea; Epimeria, n.sp. ... 510
hyperiid; South Pacific, gyre ... 520
Monoporeia, affinis, as bioturbator; community structure, meiobenthic, effects on; bioturbation, biological disturbance ... 980
Gammaridea, families and genera; handbook of keys, diagnoses ... 1671
new sandhoppers; Mexico: Gulf of, U.S. coast ... 1672
Mexico: Gulf of, N; Florida, Panama City beach; Haustorius, jayneae n.sp. ... 1676
Pontoporeia, affinis; currents, response to; factors affecting horizontal migration ... 1681
Red Sea; Aqaba: Gulf of; Gammaridea, 7 families; corals, rubble, from ... 1682
Canary Islands, W, interstitial waters; Bogidiella, (Stygogidiella) atlantica n.sp.; stygofauna ... 2289
benthic; Baltic Sea, archipelago; Pontoporeia, affinis, femorata; production ... 2290
gammarid; Caribbean Sea; Netamelita, 2 n.spp. ... 2292
Japan; Seto Inland Sea; Melita, 2 n.spp. ... 2295
hyperiid; North Pacific, W; Physosomata; Scina, 4 n.spp. ... 2297
Antarctic; Orchomene, plebs; bioassimilation; chemicals, HCH, HCB ... 2317
Fundy: Bay of; Saint Lawrence Estuary; shelf communities, supra-benthic; subcommunity structure compared ... 2803
Antarctica; sublittoral zoobenthos ... 2813
Tenerife, and Hierro; Ingolfiellidea, new species; interstitial fauna ... 2824

biology; colloquium proceedings 2826
emphasized; Southern Ocean; King George Island; benthic fauna; in German, English abstract 3170
gammarid; Antarctica; Paradyopedos, n.gen.; in German, English abstract 3183
iphimediid; Barbados; Coboldus, laetifucatus n.sp. 3189
gammarid; Antarctica; Pseudodulichia, n.gen.; in German, English abstract 3192
Amsterdam Island
1980-87; Indian Ocean, variability over; precipitation chemistry 2541
anaerobic muds (More at MUD ...)
anaerobic respiration
eutrophication, gradients; carbon sedimentation; seasonal patterns 475
anaerobic starvation
survival; bacteria, marine 2736
analytical chemistry
environmental monitoring; review 170
spectroscopy, atomic; development, progress 172
natural waters; trace analysis; biennial review of techniques 178
chromatography; spectrometry; pyrolytic analysis; recent developments 2968
standard reference materials; materials and methods 2973
analytical geochemistry
geological samples, and inorganic matter; review 175
Andaman Islands
Bengal; Bay of; Scolecobasidium, sp.; corals, massive, necrotic patches; fungi, invasion by 2850
Andes Mountains
central; subduction zones; crustal deformation; flow model derivations 373
andesites (More at IGNEOUS- ...)
anemometers
pressure sensors; improved version 734
Angola
sea turtles, surveys 958
Angola Basin
South Atlantic; water masses; Antarctic Bottom Water 1818
Angola Current
Benguela Current; Siphonophora, vertical distribution of 34 taxa; currents, confluences, at 2789
Anguilla
rostrata, A. japonica; Sargasso Sea; North Pacific, subtropical; eels, spawning areas; expedition reports 2385
animal skeletons
component of; chitin, paleoecology 1452
Anomura
Petrolisthes, spp., distribution; intertidal zonation 512
Paguroidea; Parapagurus, genus revision, W Atlantic spp. redescriptions 515
Pacific, E; Decapoda; Pagurus, lepidus complex, 3 n.spp. .. 1677
Banda Sea; Hippidae, large, brachyuran-like larva; the largest known zoea 2285
Australia, NW, Kimberley region; Thalassinidea; Brachyura; 175 taxa 3191
anoxia
Chesapeake Bay; eutrophication; a 2000-yr history 2884
anoxic basins
Mediterranean Sea, E; sapropels, deposition; past and present deposition 2014
from; Mediterranean Sea, E; bacterial mats 2054
and sediments; seawater; molybdenum, concentration; vanadium, concentration 2579
anoxic sediments
phenols, halogenated, degradation 225
microbiota, processes affecting alanine and glutamic acid 488
thiols, evidence for biological turnover 1982
hypersaline; sulfur, inorganic speciation 2057
cyanobacteria, mat-building; sulfur, metabolism 2773
anoxic water
trace elements; filtration, techniques for river, coastal waters 3023
Antarctic Bottom Water
flow; North Atlantic; abyssal gyres 1133
Angola Basin; South Atlantic; water masses 1818
Antarctic Circumpolar Current
South Atlantic, W, deep boundary current; currents, observations 666
model; currents; vorticity, dynamics of seasonal variations .. 1802
Antarctic Ice Sheet
Gondwana, break-up, possible trigger for; plate tectonics .. 429
volume state implications; Hypsithermal, during; glaciers, advance; global warming 2089
Antarctic Peninsula
area; South Shetland Trench; crust, seismic reflection investigations; preliminary results debated 409
around; seawater optics; bio-optical properties 1214
ecosystems; plankton; krill; Project RACER overview 1576
Bransfield Strait, region; phytoplankton blooms, spring; DNA, dissolved and particulate, dynamics 1585
Bransfield Strait, region; phytoplankton; primary production 1595
Bransfield Strait; larval fish; distribution and abundance .. 1599
Bransfield Strait; phytoplankton, observations, modelling; mixing, depth, relationship to 1603
Bransfield Strait, region; glutamate, assimilation patterns; thymidine, assimilation patterns; phytoplankton blooms, spring 1652
Bransfield Strait, region; microbial biomass; productivity 1655
Bransfield Strait, region; Euphausia, superba; krill, distribution and population structures of immature and adult krill 1673
Bransfield Strait, region; Euphausia, crystallorophias; krill, development rates and habitat shifts 1674
Bransfield Strait, region; Euphausia, superba; krill, growth and early development, mesoscale variation 1678
Bransfield Strait, and Gerlache Strait; Drake Passage; Euphausia, superba; krill; depth relationships of eggs, larvae and adults 1684
N; diatoms, sediment trap assemblages 1694
N and W of; microplankton, autumnal distributions; in German, English abstract 3156
Antarctica
ocean around; Arctic Ocean; sea ice 79
marginal ice zone; sea level, height determination above; GPS applications 80
E; Gondwana, reconstruction; India, S; plate tectonics .. 370
Esperanza Bay; seabirds, breeding; penguins, Adelie, depth utilization by 487
Prydz Bay; Euphausiacea, larval abundance, distribution .. 511
algal metabolism, DMSP; salinity, tolerance; temperature, tolerance; ecophysiological investigations; in German, English abstract 532
South Orkney Islands, Signy Island; sediments; microphytobenthos, seasonality 539
around; sea ice, variations; air temperature, seasonal; relationships 748
waters around; micronekton; macrozooplankton; community structure; sea ice, beneath 961
Bransfield Strait, W, region; water masses; geostrophic circulation 1132
Ross Sea; chlorofluorocarbons; circulation tracers; ventilation, rapid 1136
over; polar stratospheric clouds; atmospheric particulates; aerosol types, temperature, ozone layer implications . 1300
Bransfield Strait; organic matter, production; particle flux; seasonal coupling 1337
Ross Sea; sediments, geochemistry 1393
Cetacea, on; parasite fauna; use as potential stock indicators 1625
seabirds; guano, nutrient supplies; nunataks, inland, to; effects of ornithogenic products on ecosystem structure and functioning 1649
coastal waters; Copepoda; Calanoides, acutus, dynamics .. 1679
waters around; Euphausiacea; krill larvae, distribution 1683
oil pollution; penguins, effects on energy metabolism and physiology 1700
Bransfield Strait; Research on Antarctic Coastal Ecosystem Rates, project objectives and results 1722
Ross Ice Shelf, dynamics; ice shelves 1843
ice cores; snow, evidence for recent increases in accumulation 1849
environment; hydrocarbons, baseline; pollution monitoring; review 1988
sea ice; sedimentary facies, associated 2045
McMurdo Sound; basin sedimentation; interglacial climate, conditions; resultant facies distribution 2048
West; Weddell Sea, opening; paleomagnetism, Thurston Island; magnetic field; tectonics 2134
Mt. Erebus; Hawaii; Iceland; East African Rift, System, Nyiragongo/Nyamuragira; hotspot volcanism; mantle plumes, deep; great circle distribution 2159
waters around; sea ice; epontic communities, structure; productivity 2214

Prydz Bay, in summer; Euphausia, superba; krill, post-larval, distribution and abundance ... 2219
macroalgae, endemic; photosynthesis; respiration, dark; carbon fixation, light-independent ... 2306
Signy Island; primary production; benthic microalgae ... 2309
Ronne Ice Shelf, beneath; circulation ... 2404
Vostok; atmospheric carbon dioxide; paleoclimate; ice cores ... 2508
Weddell Sea, ice-covered; zooplankton biomass ... 2670
Scotia-Weddell Confluence; nitrogen, inorganic, stocks and uptake flux variability ... 2681
waters around; bacterioplankton, seasonal changes ... 2724
Bransfield Strait; bacteria, number, heterotrophy, extracellur enzyme activity ... 2743
first record; Chaetognatha, benthic polar; Spadella ... 2782
Amphipoda; sublittoral zoobenthos ... 2813
Pygoscelis, adeliae; humans; aircraft; penguins, Adelie, effects on ... 2870
Filchner-Ronne Ice Shelf; ice shelves, flow; in German, English abstract ... 2922
Atka Bay; sea ice; energy budget, formation underwater, growth; in German, English abstract ... 2928
Southern Hemisphere, circulation sensitivity; ice leads, pack; ocean-atmosphere interactions ... 2933
Amphipoda, gammarid; Paradyopedos, n.gen.; in German, English abstract ... 3183
Ostracoda, benthic; in German, English abstract ... 3187
Amphipoda, gammarid; Pseudodulichia, n.gen.; in German, English abstract ... 3192
Powell Basin, Kapp Norwegia etc; Southern Ocean; Polarstern expedition contributions; in German, English abstract 3234

Anthomedusae
Leptomedusae; Limnomedusae; Narcomedusae; Trachymedusae; medusae, distribution patterns ... 2795

anthropogenic carbon dioxide
Weddell Sea, transport into ... 1271

antibiotic<s> (More at DRUGS ...)

antibiotics
heavy metals; bacteria, vent, 8 taxa, susceptibility ... 2738
resistance to; Escherichia, coli ... 2837

Antichthomysis
notidana n.gen., n.sp.; Tasmania, S; Mysidacea, leptomysinid ... 3186

Aoga Shima Canyon
Izu-Bonin Arc, forearc; submarine canyons, development 2019

Apalachicola Bay
Florida; salinity, horizontal gradients, effects ... 1317

Apalachicola Estuary
Florida; Copepoda, planktonic; seasonal patterns in adult, copepodite, nauplius, and egg abundance in the seabed ... 2284

aphotic zone (More at ZONES ...)

Appalachian Mountains
N, implications for; Maine; Gulf of; Fundy; Bay of; tectonics, deep seismic reflection data ... 2626

apparatus (See especially OCEANOGRAPHIC APPARATUS and by specific class or type ...)

Appendicularia
retention in houses; cadmium; zinc ... 1347

Aptian
Ontong Java Plateau; Indian Ocean; mantle plumes; volcanism, flood basalt ... 2148

Aqaba: Gulf of (See also Elat: Gulf of)
Red Sea; Amphipoda; Gammaridea, 7 families; corals, rubble, from ... 1682
seismicity; magnetic field, data ... 2635
Jordan, beaches; macrobenthic communities; seasonal variation in community structure ... 3167

aquaculture (See also agronomy, hatcheries, mariculture and by specific organism; more at CULTURE ...)
mariculture, extensive; ecology and management aspects; 39 papers ... 1046
marine basins for larval fish rearing; plankton succession; fish ... 1607
environment; interactions ... 1712
planning, for; Norway; surface temperature; remote sensing ... 3252

aquaculture: tropical
South Pacific; advances; 75 papers ... 572

aquatic communities (More at COMMUNITIES ...)
microbiota; amplification, cloning and sequencing of a nifH segment ... 1656

aquatic ecosystems
Finland; mercury, concentrations; pollution, 20 years after abatement of source ... 2326
fate in; bacteria, autochthonous and fecal ... 2770

aquatic environments
viruses, production and decay ... 489

aquatic macrophytes
ecology; nature of scale and use of hierarchy theory ... 1020
carbohydrates, signatures, and dissolved degradation products; determinations ... 2308

Aquatic Sciences and Fisheries Information System
databases, international; history, developments; French and English ... 578

Arabian Gulf
past, present and future states; environmental management; war, aftermath, impacts ... 593
Al-Khiran; Ostracoda, community; hypersaline channels . 2273
Saudi Arabia, coast; Foraminifera, recent benthic ... 2302
Oman; Gulf of; phytoplankton, distributions; environmental conditions September 1986 ... 2678

Arabian Sea
Somali Basin; bottom circulation ... 12
Basin; boundary currents ... 27
Quaternary, Late, during summer; atmospheric circulation, paleo-; coastal upwelling ... 322
over; insolation; monsoons, SW, during; irradiance ... 736
NW; Hyalinea, balthica; sediments; fossil record ... 847
nitrous oxide; water column ... 1324
SE; depositional environments; sediments, $CaCO_3$, organic C, and sulfide S variations ... 1402
India, margin; seamounts; geophysical studies ... 1496
air-sea interactions; monsoon circulation, onset; budget and sensitivity studies ... 1920
cores; Indus River; river discharges, influence; calcium carbonate, content; sediments ... 2088
Bengal; Bay of; storm waves; cyclonic model ... 2449
from; air-sea interactions; methane flux; atmosphere, to 2514
variability in thermal response; monsoons, response to forcing by; circulation; heat flux; air-sea interactions ... 2515
suspended detritus; energy content ... 2576
NW; phytoplankton blooms; monsoon, SW, 1979 ... 2671
Lakshadweep; seagrass beds; habitats, complexity; macroinvertebrates, abundance; coral atolls ... 2705
central; bacteria, vertical distribution, activity ... 2742
E; Foraminifera, planktonic; ecology, distribution (30 spp.) .. 2828
Somali Current; currents; undercurrents, seasonal, modelling ... 2904
geographic extent in; denitrification ... 3035
fish; metals, heavy; cations, major; concentration correlations 3217

Arafura Sea
Papua New Guinea; petroleum seeps; sediments, onshore and offshore; detection methods ... 1567

aragonite
Sargasso Sea, fluxes to; calcite, magnesian; seawater ... 212

Aral Sea
drastically reduced water levels due to heavy demands on tributaries; Eurasia; irrigation; history, consequences .. 1101

arc petrogenesis
Philippines; Luzon Arc, S; geochemisty, petrology ... 378

arc tectonics
Mediterranean Sea; Hellenic Arc, and Cyprus Arc ... 349
Mesozoic, Mid, the Gravina sequence; Alaska, SE ... 900
Sumatra; crustal deformation; plate motions ... 1539
Vanuatu; seismicity ... 1540
Izu-Bonin Arc; Sumisu Rift, structural development ... 1557
Ryukyu-Kyushu Arc; North Pacific, NW; earthquakes; plate boundaries, thermomechanical state ... 3119

arc volcanism
basalts, appearance of low-Ca pyroxenes ... 386

Arcellacea
Mississippi Delta, lower; Foraminifera; controls on spatial distributions ... 3197

archaebacteria
Indonesia, seas around; bacteria, hyperthermophilic; hydrothermalism, near ... 3177

arcs (More at LITHOSPHERE ...)

arcs: island
beneath; North Pacific, W; seismic tomography, imaging; subducted lithosphere ... 1559
Pacific; Solomon Islands; Vanuatu; petroleum potential ... 1564

arcs: volcanic
Hellenic Arc; Aegean Sea; hydrothermalism; metallogenesis, processes ... 1415
mantle, sources, the Hf-isotope connection; mid-ocean ridges; islands ... 1548
active; convergent margins; lithospheric stress, fields of the overriding plate ... 2131
New Hebrides Arc, (Vanuatu); magmatism, trough; K-Ar geochronology and petrology ... 3106
Arctic area
sediments; trace metals, persistence; drilling effluents, contamination by ... 1092
Laptev Sea; shelf, structure ... 1530
off Canada; Cetacea, beluga whales; pollutants, aromatic DNA-carcinogen adducts ... 1708
oil spills; burning, proposed as possible cleanup technique; report ... 1755
polar lows; weather forecasting; model sensitivity experiments ... 1949
Canada, E; shelf sediments; surficial geology ... 2047
Canada; tidewater glaciers; sedimentation, glaciomarine 2069
Canada; shelf exploration; engineering, concerns; oil ... 2354
Soviet; marine research ... 2880
sea ice; satellite detection during cloudy conditions ... 2918
Lancaster Sound; sea ice; climate, measurement of state variables ... 2919
Quaternary, Late; sediments; magnetostratigraphy; in German, English abstract ... 3075
environments; remote sensing; polar seas; environmental monitoring; resource management; symposium papers 3227
Canada, development; radar imagery, role; background, applications ... 3229
Arctic Ice Dynamics Joint Experiment (Use AIDJEX)
Arctic Ocean
Antarctica, ocean around; sea ice ... 79
noise, ambient; acoustics; automatic extraction of springtime transients ... 104
area; petroleum potential, offshore; hydrocarbons, reserves 908
sea ice; remote sensing, concurrent from submarine and aircraft ... 1211
acoustics, reflections; sea ice, from ... 1219
West Spitsbergen Current; bottom pressure; currents, seasonal variations ... 1806
internal waves, packets; ice flexure ... 1844
seafloor, relief; bottom topography; new orographic map .. 2017
trans-; Bering Strait, submergence 3.5 Ma, following; biological invasions; fossil record; biogeography 2112
shelf; North America; shelf communities; benthic ecology; invertebrates, benthic ... 2242
from; Norwegian Sea; Greenland Sea; Iceland Sea; saline outflows; water masses, deep water formation .. 2419
internal waves; finestructure, velocity ... 2451
Fram Strait; phytoplankton communities; distribution in relation to hydrography ... 2682
Canada Basin; water masses, age of deep waters; primary production, way to estimate ... 3257
Arenicola
marina, burrows; Polychaeta; intertidal sediments; bacteria, impact on ... 2733
Argentina
Bahia Blanca, El Toro Channel, geomorphological evolution; shoreline dynamics; estuarine channels ... 256
Santa Elena shoal; intertidal zone; endolithic fauna; substrates, characteristics, relationship to ... 2704
Foraminifera, unilocular ... 3079
argon dating (More at DATING ...)
Argopecten
irradians, as prey; Bivalvia; eelgrass beds, canopy as refuge; predators, benthic, from ... 981
Armadilloniscus
steptus n.sp.; British West Indies; Pine Cay; Isopoda ... 1685
aromatic hydrocarbons (More at HYDROCARBONS ...)
PAH; chemical analysis; sediments, and other marine particulates; Shpol'skii fluorometry ... 174
volatile; Selenastrum, capricornutum; toxicities, and bioconcentration, relationship; microalgae ... 552
Sweden; Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; atmosphere, in ... 1947
Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; atmosphere, in ... 1987
sediments; rapid screening method ... 1990
arsenic
scavenging of; seawater; phosphorus, scavenging of; iron, oxyhydroxides, hydrothermal, by; inter-ocean variations .. 188
Yugoslavia; Krka River, and Estuary; selenium ... 1995
arsenate stress; periphyton communities; pattern of cotolerance ... 3199
Artemia
franciscana; Copepoda; copper, uptake; effects of hydrogen ions and inorganic complexing ... 2839
artificial ecosystems (More at ecosystems ...)
artificial islands (More at ISLANDS ...)
offshore; development, implications, applications; report 2353
artificial reefs (More at REEFS ...)
emerging science and technology ... 1075
and structures; fish, attraction; role of depth and interstice size 2368
artificial substrates
plastic litter, marine ... 551
Asal Rift
Quaternary; Djibouti; crustal deformation; spreading ridges, slow-, mechanics ... 3093
Ascidiacea
Didemnum, moseleyi; invertebrate colonies, size, shape effects; rates of fission, fusion, growth, mortality ... 996
aseismic ridges (More at RIDGES ...)
seafloor; model of structure, formation ... 2172
85°E, origin; Indian Ocean, Rajmahal Traps origin; Crozet Islands, hotspot; hotspots, traces; reconstruction ... 2630
Indian Ocean; Chagos-Laccadive Ridge, origin and compensation; gravity field, and bathymetry ... 2638
Asia
SE; Indonesia; collision tectonics; regional evolution since 43 Ma ... 367
SE, coast; Isopoda, sphaeromatid; Paracilicaea, 2 n.spp. ... 1007
Asia Minor
beneath; Europe, beneath; Mediterranean Sea, beneath; seismic tomography, delay-time; mantle, upper ... 2174
assays (See also bioassays ...)
assemblages: bacterial
tropics, coral reefs vs pelagic waters; protein synthesis, and DNA synthesis, rates ... 2264
assessment: environmental
U.K., Severn Estuary; pollutant discharges ... 590
seismic profiling, marine; discussion ... 2347
assessment: impact
biota, aquatic; pollution, specific effects; usefulness of numerical methods ... 3208
assessment: pollution
natural waters; sediments; evolution of concepts and methods; 6 papers; in French, English abstracts ... 594
assessment: risk
developing a strategy; Chesapeake Bay ... 1090
associations: professional
U.S.; government employees; current ethics proposals harmful to scientists ... 1105
Asterias
rubens; Scotland, St. Andrews coast; Gibbula, cineraria; Nucella, lapillus; epifauna, developing assemblages; grazers, effects of; recruitment, of epifaunal invertebrates 3172
Asterionella
formosa; irradiance, high, responses to; diatoms, spring maximum, decline of ... 1697
Asteroidea
17 spp.; Echinodermata; Mozambique, Inhaca Island; systematics, zoogeography ... 3182
asteroids
near miss, January 1991; bolide impacts ... 2892
asthenosphere (More at EARTH ...)
upwelling; East African Rift, System; Kenya, Samburu Hills; basalts, chemistry, secular variations; volcanism . 391
intrusions; Africa, East; East African Rift, System; continental rifts; crust, beneath ... 2888
asthenospheric upwelling
intermittent; Kenya, Gregory Rift; basalts, composition, dates 1505
asthenospheric viscosity
Iceland; deglaciation, post-glacial rebound ... 1553
Atlantic (See also North-, proto-, and South Atlantic, and narrower geographic, physiographic and zonal designations ...)
hydrophysical surveys; mesostructure ... 6
tropical, over; dynamic topography ... 9
Cape Verde Basin; Brazil Basin; magnetic field, structure 333

Madeira Abyssal Plain; manganese nodules; abyssal sediments; mechanism of surface retention of nodules during sedimentation changes 427
tropical, 20°N-20°S; surface temperature; thermocline, depth; relationship at annual, interannual time scales 626
tropical; climate, indices; surface temperature; applications 630
California Current, system, and tributaries; Pacific; oceanography; special tribute issue for Joseph Reid; 25 papers .. 632
tropical, 1984-1990; eddies; long waves 696
1990; tropical cyclones 757
hurricanes, 1990 season 764
trans-; Sahara Desert, as origin; eolian dust; observations, analysis of a Saharan dust outbreak 771
Vema Fracture Zone, transverse ridge; fracture zones; crust, geology 880
equatorial; Romanche Fracture Zone; transform faults; bathymetry 891
E equatorial; Miocene, lower; Niger Delta, Afam clay member; delta sediments 1395
Cenozoic; Sierra Leone Rise; lamprophyric volcanism; tectonics; implications for regional tectonics and stratigraphic time scale 1499
central, early opening; magmatism, tholeiitic, Ar-dating and geochemistry; rifting 1550
30°S to 77°N; temperature; salinity; flow, fields 1769
Pacific; equatorial currents; wind, as forcing agent; contrast in seasonal cycles 1808
tropical; salinity, subsurface maximum, formation 1959
E tropical; Africa, West, off (20-38°N); magnetic field, anomalies 2118
tropical; surface temperature, effects of; freshwater flux, seasonal 2396
water masses, North Atlantic Deep Water; flow, across the equator; volume transport 2423
flow tracers; hexachlorocyclohexane, isomers 2584
W; Holocene, Early; submerged reefs, relict 2592
W; Hydrozoa; Scyphozoa; medusae 2787
Guinea; Gulf of; upwelling, equatorial and coastal; in French, English abstract 2908
Pacific; Baltic Sea, and the Gulf of Bothnia; Barents Sea; ferromanganese nodules; Ce, Nd, Sr isotopic compositions compared 3138
W; Brachyura, majid; Mithrax; Mithraculus 3194
Cephalopoda; in German, English abstract 3195
Bremerhaven, Germany to Puerto Madryn, Argentina; Romanche Fracture Zone; sonar, systems testing; in German, English abstract 3232

atmosphere (See also air, AIR-SEA INTERACTIONS, BOUNDARY LAYERS, FRONTS, greenhouse effect, stratosphere, troposphere ...)
conditions; air-sea interactions; ice-ocean interactions, and air-; satellite imagery; legacy of the Seasat mission . 140
North Pacific, NE, off U.S. coast; air, marine, composition .. 160
light; color; optical phenomena; review collection; 23 papers 775
circulation modelling; oceans; computational dispersion properties of horizontal staggered grids 1053
lower, winter and summer conditions and variations; California; Gulf of 1284
Indian Ocean, S; carbonyl sulfide, annual variation 1296
outer; comets, small, striking; small comet hypothesis vs instrument artifact hypothesis 1757
precipitable water; radiance, IR satellite images, estimates from 1898
ocean-atmosphere interactions; typhoons, zone, in 1911
North Atlantic, W; sulfides; radon; seawater 1936
in; sulfur, elemental; origins explored 1937
Europe, coastal zone; trace gases; CO_2, CH_4, COS 1940
in; Sweden; Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; aromatic hydrocarbons 1947
in; Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; aromatic hydrocarbons 1987
over ocean; humidity, profiles 2496
to; Arabian Sea, from; air-sea interactions; methane flux 2514
greenhouse gases; carbon monoxide; methane 2549

atmospheric aerosols
radioactive; El Niño, occurrences; seasonal maxima in concentration 163
importance; climate; overview 740
clouds; radiance; interactions, climate modelling implications 772
North Sea; English Channel; particles, chemistry, source . 773
global climate, effects on; symposium; 24 papers 774
World Ocean, over; sulfates, non-sea-salt, and methanesulfonic acid 1301
methanesulfonate; cloud condensation nuclei; seasonal relationship 1943
South Atlantic, over; particulates; lipids, terrestrial 1946
clouds; remote sensing, NOAA/NESDIS 2536
Indian Ocean, distributions over; trace metals, particulate . 2551

atmospheric boundary layer (More at BOUNDARY LAYERS ...)
marine; humidity, variability in and above the MBL 1899
marine; eddies, flux parameterizations and variability of boundary conditions 1916

atmospheric carbon dioxide
plants, aerial fertilization effect; greenhouse effect, implications for; climate warming 133
possible effects on; iron fertilization 794
World Ocean; carbon cycle, global; glaciation, during, pCO_2 reduction 1263
gradual changes; ocean-atmospheric interactions, coupled model; model transient responses 1277
calculating future concentrations 1295
Greenland Ice Sheet, as record, 1530-1940; ice cores, trapped in 1297
increase; ocean-atmosphere interactions; global warming; GCM simulations analyzed 1747
global temperature; silicate weathering, effects of 1904
seawater, heat of solution in 1964
global emissions; mitigation, options; preliminary assessment . 2370
a biological approach to slowing the increase 2388
carbonates; silicates; global shifts in chemical weathering and decarbonation 2389
biota, marine, role as sink; comment 2507
Antarctica; Vostok; paleoclimate; ice cores 2508
paleogeography; global temperature, surface; coupled model with latitudinal contrast 2612
climate change 2951

atmospheric chemistry
review 1298
North Atlantic, W, over; dimethylsulfide, emissions, seasonal variations; sulfur; nitrogen 1938
North Atlantic, over, Dakar to Woods Hole; precipitation, chemistry 1939

atmospheric circulation (More at CIRCULATION ...)
response; Pacific, tropical; ocean-atmosphere interactions; surface temperature 143
Northern Hemisphere; surface temperature, sensitivity to 144
Hadley; ITCZ; potential vorticity modelling 148
paleo-; Quaternary, Late, during summer; Arabian Sea; coastal upwelling 322
mesoscale; Gulf Stream; marine boundary layer; numerical simulation of cold air outbreak 763
ocean-atmosphere interactions; ENSO predictability 1272
Southern Hemisphere; intraseasonal variations 1775
Baltic Sea, Swedish coast; marine boundary layer; observations 2526
Pacific, tropical, vertical motion over 2962

atmospheric convection (More at CONVECTION ...)
Pacific, W tropical, over; surface temperature; water vapor; relationships 139
tropical cyclones; variations caused by upper-tropospheric troughs 765
Australia, N of; monsoon circulation; the Equatorial Mesoscale Experiment, overview 1897
tropospheric waves, Rossby-gravity; structure, variation of tropical convection fluctuations 2522
precipitation, and kinematic structure; convective line structure 2523
precipitation, and kinematic structure; momentum transport, and generation 2524

atmospheric deposition
World Ocean; trace chemistry 2510
coastal zone, waters; nitrogen, inputs 2511
Mediterranean Sea, W; nitrogen, inorganic 2957

atmospheric depressions
India, over seas around, 1989; cyclones 2545

atmospheric diffusion (More at DIFFUSION ...)

atmospheric dispersion (More at DISPERSION ...)

atmospheric energy
hydrologic cycle 2967

atmospheric iron
deposition; North Pacific; primary production; phytoplankton, responses 955

atmospheric jets
coastal; South Carolina, coast ... 1922
atmospheric moisture
deficit; Northern Hemisphere, 140 kya; deglaciation, major ... 316
atmospheric monitoring
air temperature; remote sensing; microwave temperature sounders compared ... 2492
tropospheric temperature; remote sensing; precision monitoring 1979-90 ... 2497
atmospheric nitrogen
deposition; Chesapeake Bay, Estuary ... 1086
atmospheric optics
properties; North Atlantic, variability over; in German, English abstract ... 2960
atmospheric oscillations
intraseasonal; North Pacific; cumulus convection, tropical; ocean-atmosphere interactions ... 147
meridional; ocean-atmosphere interactions; uncoupled modes ... 1279
semi-annual; Southern Hemisphere; mechanism of the SAO 1924
circulation, GCM simulations; North Pacific Oscillation, observations; comparison ... 2521
atmospheric ozone
minimum; Pacific, equatorial ... 1942
atmospheric particulates
Antarctica, over; polar stratospheric clouds; aerosol types, temperature, ozone layer implications ... 1300
cloud condensation nuclei, and Aitken nuclei, measurements; climate, -cloud-DMS hypothesis, relation to ... 1927
global and regional scales ... 1945
Pacific, over; sulfate aerosols ... 2550
North Sea; hydrocarbons, fraction; distribution, origin ... 2553
atmospheric pressure
variations; North Atlantic, tropical, subtropical; surface temperature, anomalies; relations ... 2955
systems; Southern Oscillation; El Niño; influence on the subtropical high ... 2961
atmospheric research
oceanography; instrumentation, and observational systems; national facilities and needs ... 1720
atmospheric sulfur cycle
global; 3-D modelling ... 766
atmospheric temperature (More at TEMPERATURE ...)
surface; greenhouse gases; analysis of changes 1890-1985 ... 1268
climatic databases, ATMOES; satellites, operational environmental ... 2861
atmospheric transport
Mediterranean Sea, basin; eolian dust; dust intrusion events 769
atmospheric turbulence (More at TURBULENCE ...)
atmospheric water vapor
circulation modelling; climate; better understanding of water vapor role needed ... 1749
atmospheric waves
PNA; North Pacific; surface temperature; interactions .. 142
unstable inertia-gravity; typhoons, development; tropical cyclones; effects on storm development ... 158
clouds, clusters ... 1288
Southern Hemisphere; storms, eddy energy budget; life cycle of a cyclone wave ... 1925
Quasi-Biennial Oscillation; mean zonal flow response to Rossby and gravity wave forcing ... 1926
baroclinic; response to nonuniform thermal forcing at the lower boundary ... 2531
atoll<s> (See also microatolls; more at ISLANDS, REEFS ...)
Atoll Research Bulletin
journals; contents list and indexes ... 2351
atoll states
future of; climate change; sea level, rising ... 1737
atolls: coral
Arabian Sea; Lakshadweep; seagrass beds; habitats, complexity; macroinvertebrates, abundance ... 2705
atomic emission spectrometry
update ... 1308
attractors: strange
plankton, dynamics; chaos theory ... 2340
audits
GAO; universities; indirect costs; consequences of abuses . 2372
Auke Bay
Alaska; phytoplankton blooms; interannual variability ... 457
Australia
Bass Strait, cascade; shelf-break fronts; nutrients; plankton ... 440
N; sharks; distribution, size, sex composition, reproductive biology, diet ... 460
NE, Endeavour River; species sequencing; mangroves; zonation, analysis ... 481
E; margin sediments; bacteria, growth rates, heterotrophic activity ... 499
Carpentaria: Gulf of; Isopoda, cryptoniscid; larval migration and advection ... 518
Peel-Harvey Estuary; eutrophic estuaries; macroalgae, changes in biomass, species composition ... 533
W; Shark Bay; Bivalvia, in; cadmium, origin of high loads; particulates, uptake with ... 557
New South Wales; coral reefs, rocky; humans, as predators, impact ... 598
SE, waters around; El Niño; Southern Oscillation; ENSO episodes characterized ... 744
Sydney, area offshore; silicones, polyorganosiloxanes; pollution ... 799
NE; Torres Strait; sand waves, subtidal dunes; currents, wind-driven; dune asymmetry reversal with reversing currents ... 817
off; Exmouth Plateau; continent-ocean boundaries; transform margins; tectonics, development ... 863
environmental impact, predictions; accuracy, quantification analysis ... 1084
Great Barrier Reef; pollution; coral reefs; opinions; 4 papers ... 1095
Leeuwin Current, mesoscale structure; currents; laboratory models and satellite imagery compared ... 1158
S, off; Great Australian Bight shelf edge; carbonate platforms, prograding margin; sediments ... 1394
SE; geomagnetic field; coast effect; 2-D interpretation ... 1462
NW, off; Exmouth Plateau; lithospheric heat flow; numerical model ... 1476
Gippsland and Bass basins; crust, deep structure, seismic imaging ... 1516
NSW; Botany Bay; Centrostephanus, rodgersii; mass mortalities; sea urchins; resultant changes in subtidal habitat ... 1632
environmental protection; offshore petroleum, industry . 1732
NW, off; environmental monitoring; oil fields, offshore .. 1734
Leeuwin Current, driving forces; Pacific; currents; wind, and heating, role ... 1800
N of; monsoon circulation; atmospheric convection; the Equatorial Mesoscale Experiment, overview ... 1897
Sydney; organic matter, characterization; air-sea interface; water column, subsurface; sediments; sewage outfalls 1972
W margin; Pliocene; Pleistocene; shoreline dynamics; coastal zone, events, history ... 2022
interglacial shorelines; review ... 2027
felt in; Indian Ocean; earthquakes, 19 Nov 1906 ... 2157
Carpentaria: Gulf of, NW; Natantia; Penaeus, semisulcatus, growth, movement, age structure and parasite infestation (*Epipenaeon ingens*) ... 2291
Perth, from; Bermuda, to; sound, propagation; acoustics, adiabatic mode interpretation ... 2466
South; Pontoniinae; Pontonia, pinnophylax, type species; Notopontonia, platycheles n.gen., n.sp. ... 2800
Alpheidae; Potamalpheops, hanleyi n.sp. ... 2801
NNE of Townsville; ocean-atmosphere interactions; heat flux, derivation ... 2958
S, Gulf of St. Vincent; sessile invertebrates; communities, effect of patch size ... 3165
NW, Kimberley region; Thalassinidea; Anomura; Brachyura; 175 taxa ... 3191
Australian Plate
Indian Plate; plate tectonics; relative motions last 20 Myr . 369
Avachinskiy Bay
U.S.S.R.nE, off 52°N; eddies, structural characteristics ... 1796
Axial Seamount
June 1988; North Pacific; temperature, anomalies; acoustics, a search for signals ... 718
Azores
N of; heat; freshwater, content; summer variations ... 2898
Azores Triple Junction
evolution; plate tectonics ... 1492

Bacillariophyceae
diatoms, drawing methods ... 542
backarc<s> (More at ARCS ...)
backarc basins
volcanic rocks; crust, structure inferences ... 2145
backarc spreading
Japan; East African Rift; rifting, active mechanism; continents, breakup ... 3097
backscatter: microwave
breaking waves; detection and verification ... 2437
breaking waves; dependence on wind and wave conditions ... 2438
backscattering: acoustic
surface, rough, excited from above and below ... 83
North Pacific, 2 sites; angular dependence ... 87
fish, number density, determinations via statistical analysis ... 88
Doppler; gravity waves, surface ... 99
suspended sediments, concentrations ... 215
ADCP; zooplankton, abundance ... 443
bacteria (See also cyanobacteria; coliforms, microvibrions; more at MICROBIOTA ...)
as inducers; carbonate precipitates, $CaCO_3$; mineralogy, and medium viscosity; relationships ... 268
effect of; calcareous deposits ... 485
microbiota; biodegradation, of GABA (gamma-aminobutyric acid) ... 491
S-reducing; mangrove swamps; ecology, physiology ... 496
chemotaxis, response to breakdown products of insoluble substrates ... 497
growth rates, heterotrophic activity; Australia, E; margin sediments ... 499
by, grown on mixed substrates; ammonium, regeneration; carbon, utilization ... 989
S-reducing thermophilic; North Sea; oil fields, waters ... 991
degradation, of alpha-hexachlorocyclohexane; is it stereoselective? ... 1033
as producers of methane; Mexico: Gulf of, Florida Escarpment base; seafloor: crust, porous, deep in; seep communities; report ... 1119
importance; zooplankton, crustacean, food sources; microalgae, importance ... 1621
associates; coralline algae; hypothesis for bacterial induction of invertebrate larvae ... 1654
antibiotic-producing; dominance, competitive, in mixed cultures ... 1658
Mexico: Gulf of; Campeche Bank; oil fields ... 1659
molecular detection; review ... 1662
purple photosynthetic; mangrove environments ... 1666
TBT-resistant; sediments, estuarine and freshwater; tin, tributyltin ... 1711
responses; Newfoundland; temperature; substrates, concentration; plankton blooms, spring ... 2261
identification; environmental monitoring; reverse sample genome probing ... 2263
oil-degrading; Caribbean Sea, W; petroleum biodegradation; currents, and oil inputs ... 2324
abundance; North Pacific, W; manganese nodules ... 2662
heterotrophic; Protozoa, grazing by; cyanobacteria, chroococcoid; plankton, communities ... 2673
anaerobic S-dependent thermophilic; South Pacific, Lau and North Fiji basins; hydrothermal vents; isolation, identification ... 2720
hydrocarbon-degrading; North Sea; Baltic Sea; petroleum biodegradation; distribution, activity ... 2722
coastal zone, brackish waters; phytoplankton; relationship, incidence of vibrios ... 2725
hydrothermal vent S-reducing; East Pacific Rise, 13°N; fatty acids, composition ... 2726
activity, limiting factors; protease activity, determinations ... 2727
seasonal variation in activity; Baltic Sea, W; Kiel Bight, near-bottom ... 2729
denitrifying; Blastobacter, sp.; intertidal zone, sediments ... 2730
numbers, biomass, activity; Baltic Sea, central; synoptic survey 2731
impact on; Polychaeta; Arenicola, marina, burrows; intertidal sediments ... 2733
psychrotrophic; Vibrio, deep-sea; amylase characterization ... 2735
marine; anaerobic starvation; survival ... 2736
vent, 8 taxa, susceptibility; heavy metals; antibiotics ... 2738
annual changes; Baltic Sea, S; eutrophic estuaries ... 2739
oil-degrading; petroleum biodegradation, and emulsification 2740
vertical distribution, activity; Arabian Sea, central ... 2742
number, heterotrophy, extracellur enzyme activity; Antarctica; Bransfield Strait ... 2743
number, production, activity; Baltic Sea; Kiel Bight, central; annual variations ... 2744
total and saprophytic, distribution; Baltic Sea, proper; Finland: Gulf of ... 2750
heterotrophic, seasonal distribution and character; Korea, near Kunsan; Yellow Sea; intertidal zone ... 2751
uptake by; organic matter, dissolved; flow, effect of fluid motion ... 2752
sediments; microbiota, thymidine and leucine incorporation 2753
Norwegian Sea, -Greenland Sea; Foraminifera; sediments, deep-sea; distribution of hydrolytic activity ... 2754
S-reducing; sediments; response to thymidine incorporation assays ... 2758
heterotrophic; India; Madras, off ... 2759
biota, bivalve molluscs as example; interactions ... 2760
macrobenthos, zoo-, burrowing; sediments, major determinant of microbial presence in ... 2762
heterotrophic, contribution to $CaCO_3$ aggregates; microbial mats, hypersaline ... 2764
Bdellavibrios, halophilic; Chesapeake Bay, area; serogrouping 2768
autochthonous and fecal; aquatic ecosystems, fate in ... 2770
heterotrophic, distribution; eutrophication, effects; environmental factors ... 2772
distribution; microbial mats; fluorescent sediment thin section technique ... 2777
viruses; organic matter, dissolved; particulates; filtration, ultra- ... 2986
importance to; organic matter, dissolved; phytoplankton, production by; patterns ... 3151
Pacific, W; fjords, in; eutrophication, influence ... 3176
hyperthermophilic; Indonesia, seas around; archaebacteria; hydrothermalism, near ... 3177
oil-degrading, distribution; Japan, NE waters; petroleum biodegradation, potential ... 3220
bacteria: halophilic
and halotolerant; North Seaoast, and the Steinhuder Meer 2749
bacteria: sediment
Ciliata, protection from feeding by ... 2771
bacterial assemblages
tropics, coral reefs vs pelagic waters; protein synthesis, and DNA synthesis, rates ... 2264
bacterial bioluminescence
bioluminescence: bacterial; molecular biology ... 498
bacterial communities
development; Baltic Sea; pelagic zone ... 1657
changing; trace metals, scavenging, effects on; particulates, deep-sea plume ... 2256
psychrotrophic; Greenland Sea, W; Fram Strait; biomass, nutritional requirements ... 2774
bacterial corrosion
seawater; iron ... 3044
bacterial growth
rates; Dead Sea; blooms, halobacteria; heterotrophic activities ... 2757
subantarctic; Macrocystis, pyrifera; kelp, giant, influence of ... 3175
bacterial mats
Mediterranean Sea, E; anoxic basins, from ... 2054
bacterial metabolites
polysaccharides, exo-, production; hydrothermal vent microbiota ... 2776
bacterial production
nutrients, influence ... 2745
bacteriology
quantitative and qualitative; surface microlayer; sewage pollution ... 2330
bacterioplankton
heterotrophic; nitrogen, requirements, contributions of DFAA and ammonium to ... 492
abundance and production dynamics; Texas; Laguna Madre, hypersaline lagoon; seagrass communities ... 927
in; amino acids, isotope dilution as tracer; carbon, sources; nitrogen, sources ... 1664
metals, accumulation dynamics; seawater ... 1665
horizontal variation; Baltic Sea ... 2258
abundance, biomass; Portugal, Ria Formosa; spatiotemporal variations ... 2721
seasonal changes; Antarctica, waters around ... 2724
pelagic; productivity, low ... 2734
distribution; Adriatic Sea; red tides, during ... 2747
Baffin Island
Canada, NE; carbonate sediments, vuggy crust; hydrocarbons, seepage, formed by ... 291

Bahamas
San Salvador; Foraminifera, benthic; surface textures 2300
central; Scleractinia; Milleporina; coral reefs; community similarity and area coverage 2710
Bahia Blanca
El Toro Channel, geomorphological evolution; Argentina; shoreline dynamics; estuarine channels 256
Baikal Rift
crust, deep structure investigations; continental rifts; seismic explorations 894
mantle, upper; crust, lower; seismicity, generation 1518
Baja California
shelf off; trace elements; water column, shelf, coastal; natural process contributions vs anthropogenic inputs 224
California, coastal; paleomagnetism; tectonics, transport, alternatives to 352
Baltic Sea
sea level; water masses, major inflows, volume 15
area; Kiel Bight; Kattegat; dissolved oxygen, fluxes; effect of inflows on deep-water oxygen conditions 204
Kiel Bight; coastal sediments; denitrification; in German, English abstract 221
S; Mollusca; metals; sediments 568
sediments; plutonium, isotope ratios 780
and adjacent regions; air-sea interface; oxygen, fluxes; organic matter, net production 781
nutrients, long-term changes; elimination of seasonal variation from data 783
S; heavy metals; sediments, enrichment factors in 806
Swartkops Estuary; Ems Estuary; Chesapeake Bay; Peruvian Upwelling; Benguela Upwelling; ecosystems marine; ecology, comparative 918
picophytoplankton, seasonal dynamics; flagellates, grazing by 938
Patchiness Experiment; chlorophyll, -a concentrations; plankton; productivity; measurements intercomparison 939
Polish, 1979-1990; Cetacea; notes, observations 964
Pomatoschistus, minutus (Pisces); Saduria, entomon (Crustacea); benthic communities, macro-, meiofauna; predation, by fish, crustaceans 966
Riga; Gulf of; sediments; nature of dislocations of the sedimentary cover 1405
S, Tornquist Zone; crust, structure; seismic surveys, deep .. 1511
S, beneath; lithosphere, lower, seismic models; crust; mantle, upper 1525
pelagic zone; bacterial communities, development 1657
Finland; Gulf of; eutrophication; pollution 1728
coast; Sweden; organochlorines, dioxins, dibenzofurans; aromatic hydrocarbons; atmosphere, in 1947
coast; organochlorines, dioxins, dibenzofurans; aromatic hydrocarbons; atmosphere, in 1987
Kiel Bight; sedimentation, rate, effects on; fecal pellets; food, supply, in relation to 2233
Gotland Basin, floor and slope; benthic deserts; zoobenthos, of 'desert' and transitional zone above 2249
bacterioplankton, horizontal variation 2258
archipelago; Amphipoda, benthic; Pontoporeia, affinis, femorata; production 2290
N; Bothnian Sea; Mytilus, edulis; cadmium; zinc 2315
Swedish coast; marine boundary layer; atmospheric circulation; observations 2526
North Sea; bacteria, hydrocarbon-degrading; petroleum biodegradation; distribution, activity 2722
W; Kiel Bight, near-bottom; bacteria, seasonal variation in activity 2729
central; bacteria, numbers, biomass, activity; synoptic survey . 2731
S; eutrophic estuaries; bacteria, annual changes 2739
Kiel Bight; eutrophication; sediment denitrification ... 2741
Kiel Bight, central; bacteria, number, production, activity; annual variations 2744
proper; Finland; Gulf of; bacteria, total and saprophytic, distribution 2750
inner coastal waters; nitrification, and denitrification; potential capacities 2755
microbial communities; distribution, activity 2763
microbial food webs; eutrophic estuaries, tideless 2767
area; Skagerrak; sediments, gas-charged; pockmarks; clay diapirs 3133
and the Gulf of Bothnia; Pacific; Atlantic; Barents Sea; ferromanganese nodules; Ce, Nd, Sr isotopic compositions compared 3138
eutrophication; pollution; benthic communities, impacts on 3148
trend analysis; chlorophyll; productivity; zooplankton, biomass; transparency, water 3149
Protozoa, planktonic, importance to; eutrophication, process 3150
microbial food webs; eutrophic estuaries 3178
benthic communities, zoo-; eutrophication, consequences 3203
benthic communities; algae; eutrophication, influences . 3209
S; Greifswalder Bodden, ecology; project aims and results .. 3236
sediments, distribution; metals; environmental implications . 3244
eutrophication; current trends in hydrographic and chemical parameters 3249
Baltimore Trough
Paleocene, Late; North Atlantic, W; sediments, stratigraphy; paleoceanography; in French, English abstract 1454
Banda Sea
S Banda Basin; circulation tracers; distribution, application of Munk's abyssal recipes 20
Anomura; Hippidae, large, brachyuran-like larva; the largest known zoea 2285
banks (See also mudbanks; more at COASTS, SEDIMENTARY STRUCTURES ...)
Banner: Albert Henry
bibliography of his contributions to science 1068
Bannock Basin
Mediterranean Sea; sediments, hardground formation 2043
Pleistocene; Mediterranean Sea; sediments, facies analysis; tectonics, evolution, key to reconstruction 2064
clay minerals; sediments, pelagic; sapropels; clay origin and differentiation 2072
Mediterranean Sea, E; tephra, layers; sediments 2075
Mediterranean Sea, E; paleoclimate, 26 to 5 kyBP; sediments, pollen and isotopic analysis 2081
Mediterranean Sea; Foraminifera, carbon and oxygen isotope composition; sediments 2108
Mediterranean Sea; sediments, evidence of relief inversion; crust 2153
Mediterranean Sea, E; microbiota, vertical distribution ... 2260
Barbados
accretionary wedges, water flow in; correction 286
evolution; Caribbean Sea; tectonics; hydrocarbons, evolution; accretionary terranes 912
prism; Caribbean Sea; margin sediments; clay diapirism 1392
coral reefs; demersal zooplankton; plankter patchiness and composition 2217
and Oregon; accretionary wedges; fluid flow, and pore pressure 2603
Amphipoda, iphimediid; Coboldus, laetifucatus n.sp. 3189
Barbados Oceanographic and Meteorological Experiment (Use BOMEX)
Barcelona
Spain; sea breezes, features 2964
Barents Sea
NW; Olga Basin, shallow bedrock geology; crust 277
ice microalgae; photosynthesis, photoadaptation 1023
glaciomarine sediments; sound, velocity, and related properties; correlations 1401
shelf; Pleistocene, Valday time; Scandinavian Ice Sheet; ice sheets, maximum advance 1423
Svalbard, margin; continent-ocean boundaries; crust, deep seismic transects across 1521
seafloor, structure at depth; crust 1554
Foraminifera, benthic; distribution of morphological groups . 1687
N, outside Nordaustlandet; tidewater glaciers, sub-polar; depositional environments; sediments 2038
shelf; electrical field, DC-sounding data interpretations 2462
W; Cenozoic; erosion; sedimentation 3076
Pacific; Atlantic; Baltic Sea, and the Gulf of Bothnia; ferromanganese nodules; Ce, Nd, Sr isotopic compositions compared 3138
barges (More at VESSELS ...)
barium
accumulation; phytoplankton, cultured 548
mobilization; Mediterranean Sea, E; sediment diagenesis; sapropels 2074
contents; Foraminifera, planktonic 2616
flux; Pacific; radium, -226 flux; importance of boundary processes 3034
baroclinic circulation (More at CIRCULATION ...)
baroclinic flow (More at FLOW ...)
China; Bo Hai; currents, tidal and residual; model; in Chinese, English abstract 33

baroclinic instability
circulation, gyre-driven; eddies, scales, resolution of 8
tropical storms, formation 759
radiation-induced; fluid dynamics 1247
air-sea interactions; heat exchange 1273
linear; fluid dynamics; Ekman dissipation, and sloping boundaries 2945
baroclinic tides
North Atlantic, W tropical; North Equatorial Countercurrent 1821
baroclinic transport
North Pacific, E; annual and interannual variability across Line P 646
baroclinic vortices
shedding; hydrothermal plumes 2478
barometric pressure (More at PRESSURE ...)
barotropic circulation (More at CIRCULATION ...)
barotropic flow
on; Long Island Sound; East River, effect of 23
sea level, response to pressure forcing 44
barotropic instability
fluid dynamics; bifurcations in a low-order model with self-interaction 1243
barotropic shear flow
in; tropical cyclones, motion 1933
barotropic tides
Mediterranean Sea; Sicily; Strait of; Tunisia, shelf 2911
barotropic waves (More at WAVES ...)
internal; Indian Ocean; internal tides 76
barred beaches
waves, variance partitioning in the trough 2433
barrier bars
shoreline dynamics, multiple-bar; edge waves, LF, relation to 247
barrier islands (More at ISLANDS ...)
and spits, migration; Canada, SE; Beaufort Sea 255
bars (More at COASTS ...)
bars: barrier
shoreline dynamics, multiple-bar; edge waves, LF, relation to 247
bars: gravel
migration and overstepping; shoreline dynamics 253
bars: thermal
fluid dynamics; lab studies 1880
basalt<s> (See also lava; more at IGNEOUS- ...)
basalt glasses
picritic; Hawaii, off Kilauea 2142
basaltic eruptions
Iceland, present-day; redox conditions evaluated 872
basalts
high-Ti tholeiites; Saudi Arabia, Aznam Trough; rifting, abortive; tectonics, early stages of Red Sea opening 359
French Polynesiahe Marquesas alignment; hotspot volcanism; in French, English abstract 375
tholeiitic, alkalic; Pacific; crust, oldest 381
fluid and silicate glass inclusions; mantle, metasomatism; magma, depth of origin; xenoliths, mafic, ultramafic ... 382
appearance of low-Ca pyroxenes; arc volcanism 386
rock formation; Solomon Islands, New Georgia group; rare earths, rectilinear partition coefficient function 389
chemistry, secular variations; East African Rift, System; Kenya, Samburu Hills; volcanism; asthenosphere, upwelling 391
tholeiitic and alkalic, petrogenesis; Hawaii; Mauna Kea; volcanoes, evolution 874
submarine; South Pacific, W, Woodlark Basin; abundances of volatiles and genetic relationships 877
primitive and highly depleted MORB; North Pacific, NE, Heck and Heckle seamounts; seamounts, off-ridge 1501
evolution, geochemistry; Hawaii; hotspots, melting model; volcanism 1502
sources; Cretaceous; Madagascar; volcanism; tracking oceanic and continental sources 1503
composition, dates; Kenya, Gregory Rift; asthenospheric upwelling, intermittent 1505
OIB, origin of end-member compositions; trace element and isotopic constraints 1509
Iceland, and surrounding area; crust, seismic structure 1522
hyaloclastite; Iceland, S shelf; mass flow deposits; volcanism, subglacial eruptions 2629
MORB; Mid-Atlantic Ridge; Sr-Nd-Pb isotope signature .. 3100
MORB, geochronology and petrogenesis; Juan de Fuca Ridge; Gorda Ridge 3102
Hawaiian; rhyolites, Icelandic; magma melts, difference between 3103
Pb isotope composition explained by sample contamination; Pacific; Rurutu Island, and Sasha seamount 3104
tholeiitic; Hawaii; Mauna Loa; Kileaua; volcanism; magma, primary, source 3111
MORB melts; mantle, residual; mid-ocean ridges, beneath; in-situ densities, buoyancy forces 3124
basalts: flood
Permian-Triassic boundary; Siberian Traps; volcanism, rapid eruption 388
mantle plumes; volcanism, initiation of, model; oceanic plateaus 2146
basement
depth to; North Atlantic, central; Kane Fracture Zone; geoid, expression 2116
basement rocks
North Atlantic, NE; Rockall Bank; geochemical and isotopic constraints on rock nature and age 293
basin<s> (More at LITHOSPHERE ...)
basin circulation
California, S, off; Santa Monica Basin; San Pedro Basin 1127
mid-depth; Japan, off; Shikoku Basin 1135
basin flushing
California, S; San Pedro Basin; San Nicolas Basin 2899
basin sedimentation
Antarctica; McMurdo Sound; interglacial climate, conditions; resultant facies distribution 2048
glacially-influenced; U.K., NW; Faroe-Shetland Channel . 2070
basin sediments
stratigraphy; Taiwan, off, Tainan Basin; tectonics; crust, structure 241
Cretaceous; Tertiary; Africa, off; continental environments 319
Mesozoic; Mediterranean Sea; petroleum, reservoirs, potential 425
Cretaceous; Cenozoic; Bering Sea, W, geology; history ... 1420
Oligocene; Neogene; Bering Sea, W, geology; Commander Basin; stratigraphy 1427
Fiji; petroleum geology 3134
basin subsidence
Pacific, W; seafloor, flattening; long-wavelength residual topography, interpretations 881
Tyrrhenian Sea, opening, postulated mechanism; tectonics . 1485
Pliocene, to Quaternary; North Sea, S; lithosphere, dynamics 1535
Skagerrak; Scandinavia; tectonics 1546
basin ventilation
Alaskan Gyre, role; water masses, North Pacific Intermediate Waters 1137
basins
silled; sea level, change, response to; sediments, organic-rich transitional facies 292
uplift; Neogene, to Quaternary; Mediterranean area; Corinth Basin, Greece; rifting; sedimentation 2606
basins: abyssal
bottom topography; spinup; circulation 1774
Hawaii, SE of; North Pacific; geophysical studies 2654
basins: anoxic
Mediterranean Sea, E; sapropels, deposition; past and present deposition 2014
from; Mediterranean Sea, E; bacterial mats 2054
and sediments; seawater; molybdenum, concentration; vanadium, concentration 2579
basins: backarc
volcanic rocks; crust, structure inferences 2145
basins: sedimentary
Bering Sea, history; tectonics 866
Caribbean Sea, NE Caribbean Plate boundary zone; petroleum potential 909
Neogene; Greece, Megara Basin; extensional tectonics; tectono-sedimentary development 1418
heat flow, models; hydrocarbons, generation; basin analysis of the South Mozambique Graben 1565
evolution; Tertiary; Japan; Japan: Sea of, opening, in reference to 2096
hydrocarbon-bearing; petroleum, generation, migration; organic geochemistry; symposium papers 3132
U.K.; Inner Moray Firth, implications of Mesozoic-Recent development 3137

South Pacific; mineral resources; hydrothermalism; geology, geophysics ... 3144
Bass Strait
cascade; Australia; shelf-break fronts; nutrients; plankton ... 440
bathyal thermocline
Pleistocene, Late; Pacific, W equatorial; water masses, glacial deep-water properties ... 2094
bathyal zone
Hawaii, Alenuihaha Channel; benthic megafauna; fish, benthic ... 1633
bathymetric surveys
systems; quantitative comparison of Deep-Tow, Sea Beam, and SeaMARC II data ... 813
bathymetry (More at FLOOR ...)
slowly-varying; gravity waves, surface, small-amplitude; chaotic development ... 51
Atlantic, equatorial; Romanche Fracture Zone; transform faults ... 891
Bathymodiolus
thermophilus; Bivalvia; vent fauna; evidence for filter-feeding ... 2788
Bathynomus
giganteus, biology; Yucatan Peninsula, off; North Atlantic, SW; Isopoda, cirolanid ... 1002
bathypelagic zone
zooplankton biomass; bioluminescence ... 1613
bay<s> (More at COASTS ...)
bay circulation (More at CIRCULATION ...)
Newfoundland, Conception Bay; formulation of open boundary conditions at the mouth ... 1773
Bay of Islands
Lewis Hills; Newfoundland; mantle, upper, complex structures; ophiolites ... 1556
ophiolites, formation; subduction zones, above; geochemical evidence ... 2641
bay oscillations (More at OSCILLATIONS ...)
bay sediments
Korea, W coast, Gunhung Bay; Quaternary, Late; shallow seismic stratigraphy, distribution pattern ... 298
bays
chemistry; China, Zhejiang coast; seawater ... 186
beach<es> (More at COASTS ...)
beach cusp<s> (More at SEDIMENTARY STRUCTURES...)
beach replenishment
CZM; shoreline dynamics; discussion ... 257
beaches
bar and trough; longshore currents; numerical model ... 29
observations; U.S., Littoral Environment Observation Program; shoreline dynamics ... 259
barrier-island; Mexico; Gulf of, N; macroinvertebrates, associations; important environmental relationships ... 982
waves; runup ... 1185
sediment transport; shoreline dynamics, onshore-offshore transport ... 1370
sandy; swash zone, and effluent line, dynamics; shoreline dynamics ... 2026
Oman; tar ... 2355
beaches: barred
waves, variance partitioning in the trough ... 2433
beaches: sand
Iceland; intertidal meiofauna ... 473
wave-exposed; Hong Kong; fauna ... 986
vehicular traffic, ORVs; macrofauna, effects on ... 1094
beachrock
formation; coasts; shoreline dynamics; implications for coastal evolutionary models ... 249
Beaufort scale (More at WAVES ...)
equivalent; North Atlantic; wind statistics, effects on; air-sea interactions, fluxes ... 1253
Beaufort Sea
Canada, SE; barrier islands, and spits, migration ... 255
sound, underwater, measurements; acoustics; offshore platforms, drilling, from ... 712
Canada, W; shelf sedimentation ... 2033
Canada, W; shelf sediments; chemical interactions ... 2062
bed ripple<s> (More at RIPPLES...)
bedding: tidal
and cyclicities; U.K.; Wales, Dyfi Estuary; intertidal sediments ... 2037
Bedford Institute of Oceanography Net and Environmental Sampling System (Use BIONESS)
bedload transport
overview ... 821
bed-loads (More at SEDIMENTATION ...)
Belize
Caribbean Sea; Malacostraca; Paranebalia, belizensis n.sp. ... 2287
Bengal: Bay of
N; ammonium, subsurface maximum ... 786
acoustics, ray parameters ... 1222
W, distribution in; particulates; trace metals ... 1341
crust, magnetization; magnetic field ... 1465
NW; eddies, subsurface ... 1795
sediments; metamorphism, greenschist ... 2154
upper ocean; circulation, seasonal ... 2405
circulation, remote forcing; ocean-atmosphere interactions ... 2409
western boundary; wind-driven upwelling, coastal; monsoon, SW, during ... 2424
Arabian Sea; storm waves; cyclonic model ... 2449
N; monsoons, summer; currents, variability; air-sea interactions ... 2516
N; monsoons, SW, during; flow, stability and mixing ... 2518
Andaman Islands; Scolecobasidium, sp.; corals, massive, necrotic patches; fungi, invasion by ... 2850
Bengal Fan
Indian Ocean, central; lithospheric heat flow; sediments, evidence for dewatering ... 859
clay minerals; sediments, history, chemical characteristics ... 1384
Benguela Current
region; South Atlantic, E; ichthyoplankton, guide to ... 945
N; Euphausiacea; Nematoscelis, and Euphausia; upwelling ecosystems; diet, feeding, vertical space partitioning ... 1000
ecosystems; planktonic food webs; size-based dynamics ... 1605
ecosystem; gelatinous zooplankton; advection, large-scale, effects ... 2222
Angola Current; Siphonophora, vertical distribution of 34 taxa; currents, confluences, at ... 2789
Benguela Upwelling
Swartkops Estuary; Ems Estuary; Chesapeake Bay; Baltic Sea; Peruvian Upwelling; ecosystems marine; ecology, comparative ... 918
area; South Africa; chlorophyll, *-a* distribution; phytoplankton, possible effects on; global warming; fish, pelagic, implications for ... 1586
system; nitrogen, supply to the euphotic zone; upwelling, quiescent phase, during ... 2572
phytoplankton; nitrogen; upwelling, state variables, short-term variability ... 2665
phytoplankton, dynamics; short-term variability ... 2689
S; Copepoda; Calanoides, carinatus; zooplankton, meso-, abundance, distribution, production ... 2697
S; Copepoda; Calanoides, carinatus, fecundity; zooplankton ... 2798
S; upwelling zones, chemical and physical oceanography; short-term variability ... 2855
system, southern; water masses; biota; short-term variability 2856
phytoplankton biomass; productivity, and species changes 2685
benthic biology
Canada, W; British Columbia; shelf ecosystems ... 2240
benthic boundary layer (More at BOUNDARY LAYERS ...)
sampling, water-, new device ... 173
benthic communities (More at COMMUNITIES ...)
macro-, meiofauna; Baltic Sea; Pomatoschistus, minutus (Pisces); Saduria, entomon (Crustacea); predation, by fish, crustaceans ... 966
Georgia Bight, Gray's Reef; metabolism; nutrients, cycling 975
flora-fauna interactions; conference papers ... 2717
Aegean Sea, Cyclades Plateau; analysis ... 2718
impacts on; Baltic Sea; eutrophication; pollution ... 3148
zoo-; Baltic Sea; eutrophication, consequences ... 3203
Baltic Sea; algae; eutrophication, influences ... 3209
Adriatic Sea; Gdansk Deep; macrozoobenthos, long-term changes ... 3223
benthic deserts
Baltic Sea; Gotland Basin, floor and slope; zoobenthos, of 'desert' and transitional zone above ... 2249
benthic ecology
North America; Arctic Ocean, shelf; shelf communities; invertebrates, benthic ... 2242

Canada; shelf communities; symposium review 2250
benthic fauna
mixing by; sediments, upper layers; bioturbation 468
subtidal communities, rocky; predator-prey interactions 472
Sweden, Gullmarfjord; Crustacea, hyperbenthic 506
organic chemicals; effects of linear alkylbenzene sulphonate . 556
rocky shores; humans, trampling effects 2342
changes; Wadden Sea, Dutch; eutrophication 2707
Southern Ocean; King George Island; Amphipoda, emphasized; in German, English abstract 3170
benthic infauna
distribution; Mediterranean Sea; Ebro Delta, Els Elfacs .. 1643
benthic invertebrates
South Africa, Berg River Estuary; distribution, abundance, productivity 977
mega-, assemblages; North Atlantic, NW; Georges Bank, scallop grounds; environmental factors affecting faunas ... 984
benthic macrofauna
California, Palos Verdes shelf; standing crop long-term dynamics 471
infaunal abundance; Natantia; Upogebia, pugettensis, effects 474
France, Bay of Saint-Brieuc; collection, settlement patterns, biotic interactions 476
Finland: Gulf of; hypoxia; effects of oxygen deficiency ... 1631
Newfoundland; Grand Bank, outer; community structure, spatial, post-mortem erosion of 2251
benthic megafauna
Hawaii, Alenuihaha Channel; bathyal zone; fish, benthic .. 1633
benthic metabolism
mangrove swamps; sulfates, reduction 493
benthic microalgae
Antarctica, Signy Island; primary production 2309
intertidal; tides, stage, effects; light, sun angle effects; productivity 2310
benthic samplers
deep-sea; corers, box, GOMEX 2708
benthic suspension feeders
kelp communities; macrophytes, canopies, beneath; effects of understory kelps on faunal growth rates and survival ... 1635
benthos (See also epi-, hyper-, macro-, meio-, micro-, phyto- and zoobenthos ...)
temporal changes; pollution gradients, along; sewage outfalls; discriminating natural phenomena effects 2318
interactions with; coastal zone; pelagic food webs, structure 2668
flora and fauna; Aegean Sea; heavy metals; baseline 3204
Benue Trough
Abakaliki anticlinorium; Nigeria; magnetic surveys 1466
Bering Sea
history; tectonics; sedimentary basins 866
over; hurricanes, Arctic; synoptic analyses 1290
Seto Inland Sea; Japan; Sea of; North Pacific, W; molybdenum, dissolved, distribution 1314
W, geology; Cretaceous; Cenozoic; basin sediments; history 1420
W, geology; Oligocene; Neogene; Commander Basin; basin sediments; stratigraphy 1427
Anadyr Strait; pycnocline, topography; water column, structure; seabirds, alcid, influence on marine distributions 1650
Chukchi Sea; sea ice; polynyas, location, extent 2935
Bering Strait
submergence 3.5 Ma, following; Arctic Ocean, trans-; biological invasions; fossil record; biogeography 2112
Bermuda
Caridea; Processa, n.sp. 516
to; Australia, Perth, from; sound, propagation; acoustics, adiabatic mode interpretation 2466
from; Cape Cod, to; surface height, mean; geoid; satellite data 2622
Bermuda Rise
Foraminifera, tiny, benthic; distribution, taxonomy 526
beryllium
-10, global cycle; cosmogenic radionuclides 779
isotopes; World Ocean, in 1319
isotope concentrations; hydrothermal fluids; sediments, influence of 3059
Beyer's net (More at NETS ...)
bioaccumulation
biota; tin; in Chinese, English abstract 571
Polychaeta; Nereis, diversicolor; sediments, contaminated; plutonium, and americium; radionuclides 1701
bioassays (More at assays ...)
bioassays: pollution
Echinoidea; urchins, sea urchin eggs; enhancing sensitivity . 2323
bioassimilation
Amphipoda, Antarctic; Orchomene, plebs; chemicals, HCH, HCB 2317
bioavailability
tin; tributyltin, sediment-bound; deposit feeders, *Scrobicularia plana*, effects 3210
biochemical oxygen demand (Use BOD)
biochemical systematics
fossil record, biomolecules; molecular paleontology 2386
biodegradation
of GABA (gamma-aminobutyric acid); microbiota; bacteria 491
halogenated organic compounds; hydrocarbons 545
predicting biodegradability; pollutants; structure activity relationships 2327
biodegradation: chitin 1663
biodegradation: hydrocarbon
potentials; Prince William Sound; microbial populations; sediments, shoreline, fertilized; Exxon Valdez, spill 1705
biodegradation: petroleum
Caribbean Sea, W; bacteria, oil-degrading; currents, and oil inputs 2324
North Sea; Baltic Sea; bacteria, hydrocarbon-degrading; distribution, activity 2722
and emulsification; bacteria, oil-degrading 2740
bacteria; biogenic surfactants; microbiota, from 2769
potential; Japan, NE waters; bacteria, oil-degrading, distribution 3220
biodiversity
declining; extinction, current prophecies; environment, natural, shrinking; uncertainties, the scientific debate; report 1118
studies; science; policy; extinctionates increasing as a result of human activity 1121
biofilms
cyanobacterial mats; stromatolites; geophysiology 2833
Protozoa, by 2827
biogenic methane
Mexico: Gulf of; Florida Escarpment, base of; brine seeps, abyssal 826
biogenic organic matter
characterization by stepwise thermogravimetry 2981
biogenic particulates
North Pacific, E; microbiota, associated; biogeochemical cycling, productivity implications 2578
biogenic silica
dissolution; Pacific, central equatorial; organic matter, benthic carbon degradation 2580
sediments; suspended matter 2997
production; Weddell Sea; Scotia Sea 3201
biogenic surfactants
microbiota, from; petroleum biodegradation, bacteria ... 2769
biogeochemistry
origins and development 2374
biogeography (More at ECOLOGY ...)
biotic interchanges; fossil record; symposium 2206
patterns; Cretaceous, terminal; Tethys, and warm transitional waters; Foraminifera, planktonic; fossil record 2617
continuous process; Red Sea; Mediterranean Sea; Suez Canal, as conduit; Lessepsian migration 2667
biogeography: island
a systems dynamics model 1583
bioherms: sponge
Canada, W; Porifera; shelf 2104
bioindicators
Phalacrocorax, carbo sinensis; seabirds, cormorants; PCBs 2333
Maryland, Patuxent River; Bivalvia, oysters; copper pollution 2337
biological choruses (More at CHORUSES...)
biological disturbance (More at ECOLOGY ...)
and physical; intertidal macrobenthos, and subtidal; relative significance of disturbances 2239
biological extinction (More at EXTINCTION ...)
biological invasions
North Pacific, NE, coastal marshes; Gastropoda; snails, native vs introduced, interactions 1577
Arctic Ocean, trans-; Bering Strait, submergence 3.5 Ma, following; fossil record; biogeography 2112
Northern Hemisphere; Southern Hemisphere; fossil record; biotic interchanges; consequences 2202

Biological Investigations of Marine Antarctic Systems and Stocks (Use BIOMASS Program)
biological refuges (More at REFUGES ...)
biology (See also ECOLOGY, EVOLUTION, species ...)
biology: benthic
Canada, W; British Columbia; shelf ecosystems 2240
biology: estuarine
symposium 1648
biology: reproductive
adaptations; biota, marine 3262
bioluminescence
zooplankton biomass; bathypelagic zone 1613
bioluminescence: bacterial
bacterial bioluminescence; molecular biology 498
biomass (More at ECOLOGY ...)
aboveground vs. belowground; Spartina, alterniflora 531
and abundance; Jamaica, Kingston, off; Ciliata, aloricate ... 1686
ecosystems, system-level indicators of dynamics; productivity; body-size spectra 2199
biomass burning
fossil fuels; climate, effects on; heating or cooling? 134
biomass: chitin
and production; in marine environments 1669
biomass: fungal
significance; Thalassia, hemprichii, litter biodegradation; seagrass detritus 992
biomass: microbial
Antarctic Peninsula; Bransfield Strait, region; productivity 1655
biomass: phytoplankton
South Africa, 3 eastern Cape estuaries; primary production 1587
and composition; Weddell-Scotia Confluence, area; Southern Ocean 2215
Benguela Upwellings; productivity, and species changes .. 2685
methods comparison 3152
primary production; characterization of brackish waters of different trophic levels 3162
biomass: seagrass
and productivity; Thalassia, testudinum; nutrients, water column; epiphytes, levels; relationships; field observations 1691
rapid visual evaluation technique 3198
biomass: seston
South Atlantic, SE; Namibia, coast; upwelling zones ... 1616
biomass transport
California, N, off; current jets; phytoplankton; cool filament chemical and biological structure 3255
biomass: zooplankton
meso-; distribution patterns 446
bioluminescence; bathypelagic zone 1613
Antarctica; Weddell Sea, ice-covered 2670
eutrophication, different stages; seasonal variations 3155
biomonitoring
Mussel Watch; sampling, improved protocols 1706
programs; intestinal tracts, sediment in; error, potentially serious source of 2325
Bivalvia; Mytilus, edulis; stress, indices 2336
Europe; pollution monitoring; water quality, issues; report of the ICES Advisory Committee 2868
and assessment; tin; tributyltin, site-specific effects; mussel growth, rates 3214
California; San Diego Bay; tin; tributyltin 3219
using oysters; Mexico: Gulf of; tin, butyltins 3221
long-term; pollution monitoring; contaminants; Southern and Northern Hemisphere perspectives 3247
bioremediation
efforts, results of; Alaska; Prince William Sound; oil spills; Exxon Valdez 1726
and other strategies; Alaska; Prince William Sound; oil spills; Exxon Valdez; situation update 1727
effects; Alaska; Prince William Sound; mutagenicity, on; oil spills; Exxon Valdez 2356
biosphere: sustainable
initiative; an ecological research agenda 602
biostratigraphy
correlation; Campanian-Maastrichtian boundary; Germany, NW, Lagerdorf-Hemmoor; North Atlantic, E, DSDP sites 548A, 549, 551; paleobiogeographical and -oceanographical implications 2109
and paleoenvironments; Neogene; Eniwetok Atoll; Pacific, equatorial 2607
Cretaceous, Late; Foraminifera, planktic; Heterohelicidae 3080
biota (See also MICROBIOTA; more at ORGANISMS ...)
magnetotaxis, evolution, behavior; review 495
biochemistry; 8 papers; French and English 501
tin; bioaccumulation; in Chinese, English abstract 571
simultaneous physiological and behavioral monitoring using non-invasive technique; respiration, and cardiac activity; locomotion 914
exchanges among; species invasions; episodes of past (fossil record) interchange, implications for the future 920
oysters; Oman, coastal waters; Persian Gulf; seawater; sediments; hydrocarbons, content 1083
giant clams, corals, calcareous algae as recorders; coral reefs, histories; stable isotope analysis 1372
tidal currents; migration, vertical 1593
edible; Tyrrhenian Sea, N; selenium, levels; mercury, assessments; Se/Hg relationships 1699
mesopelagic; lipids, microextraction method 1952
marine; Japan, Ibaraki and Aomori coasts; radionuclides, Pu-239, -240, and Cs-137 1960
Southern Ocean, sub-Antarctic; organochlorines, chlorobiphenyls and pesticides 2316
marine, role minor; global change, keeping it honest; greenhouse effect; essay 2500
marine, role as sink; atmospheric carbon dioxide; comment 2507
bivalve molluscs as example; bacteria; interactions 2760
mussels, levels in; Adriatic Sea, N; chlorinated hydrocarbons 2844
Benguela Upwelling, system, southern; water masses; short-term variability 2856
aquatic; pollution, specific effects; impact assessment; usefulness of numerical methods 3208
tin; tributyltin, metabolism; possible linkages to effects 3211
effects on; Netherlands; tin, butyltins; seawater 3213
marine; reproductive biology, adaptations 3262
biota: calcareous
isotope paleontology; growth and composition of extant species 2113
biota: sessile
Japan, Nabeta Bay; community structure, temporal changes in; succession 974
biotelemetry (See also TAGGING; more at TELEMETRY ...)
biotic interchanges
Northern Hemisphere; Southern Hemisphere; biological invasions; fossil record; consequences 2202
biogeography; fossil record; symposium 2206
bioturbation
sediments, upper layers; benthic fauna, mixing by 468
biological disturbance; Amphipoda; Monoporeia, affinis, as bioturbator; community structure, meiobenthic, effects on 980
bird<s> (See also sea- and shorebirds; ornithology ...)
bird sanctuaries
Saint Lawrence: Gulf of; seabirds, populations; sanctuaries; bird; census 1982-88 486
birds
shorebirds; feathers; selenium, concentrations, variability and significance 2319
Biscay: Bay of
France; temperature, monthly mean; in French, English abstract 3
France; zooplankton communities; annual cycle of abundance, composition, size spectra 456
Bivalvia
Mytilus, edulis, effects on growth; particulates, resuspension 502
Portugal, N coast; Mytilus, edulis; metals 546
in; Australia, W; Shark Bay; cadmium, origin of high loads; particulates, uptake with 557
Hawaii; Isognomon, californicum; cadmium, bioaccumulation 564
utilization by; Abra, alba; Polychaeta, utilization by; Eupolymnia, nebulosa; fumigated sediments 973
Mytilus, edulis, variations in age-class densities; population dynamics; estuarine communities 978
Argopecten, irradians, as prey; eelgrass beds, canopy as refuge; predators, benthic, from 981
growth affected; seagrasses; habitats, modification; relationship 1021
adult sea scallops, chronic sublethal impact on; drilling muds, cuttings 1031
Mexico, Navachiste Lagoon; trace elements, distribution; baseline 1043

Tridacna, gigas shells, correlation in; temperature, stable oxygen isotope record; light, attenuation profiles 1375
Cerastoderma, edule; microphytobenthos, influence on .. 1646
Donacilla, cornea; heavy metals, accumulation; calcium, content 1709
North Atlantic; Brachiopoda, migration; climate change, response to 2105
New Zealand, Manukau Harbour; Crassostrea, gigas, condition cycles; pollution, -related differences 2331
Mytilus, edulis; biomonitoring; stress, indices 2336
oysters; Maryland, Patuxent River; copper pollution; bioindicators 2337
Bathymodiolus, thermophilus; vent fauna; evidence for filter-feeding 2788
Crassostrea, virginica; zinc, measurement variability; baseline 2843
organochlorine pesticides, chlordane; population dynamics, effects on structures 2846
Thailand; Gulf of; Perna, viridis, residues in; organochlorine pesticides 2847
North Atlantic, SE; Morocco, coast, distribution along; Donax, truncules, venustus; in French, English abstract .. 3181

Black Sea
sediments, novel pyropheophorbide steryl esters 206
winter, spring; phytoplankton production, and size fractionation 447
abyssal zone; hydrogen sulfide, balance 1323
geochemical relationships; sediments; sulfur; carbon, organic; iron 1387
pelagic ecosystems; zonation, vertical 1619
redox interface, hydrochemical structure 1963
NW; sedimentation; suspended matter, at base of water column, composition and distribution 2059
Quaternary, Late, alteration during; sediments, S, O, and C isotopic composition 2071
epipelagic zone; Ctenophora, new species, invasion by; planktonic communities, structure 2229
zooplankton, mesoplankton; factors determining position of lower layer 2232

Black Sea Current
gravitational instability 1148

Blake Plateau
over; Gulf Stream; rings; currents; coalescence event 2412

Blastobacter
sp.; bacteria, denitrifying; intertidal zone, sediments 2730

bleaching: coral
greenhouse warming; role in reef stress unproven; report ... 616
Scleractinia; Montastrea, annularis; effects on banding, isotopic composition 995

blood
hematological and rheological characteristics; marine mammals; diving, behavior, physiological implications for ... 2236

blooms
halobacteria; Dead Sea; bacterial growth, rates; heterotrophic activities 2757

blooms: phytoplankton
Alaska; Auke Bay; interannual variability 457
during; organic matter, DOC, high turnover rates 936
spring; Antarctic Peninsula; Bransfield Strait, region; DNA, dissolved and particulate, dynamics 1585
Scandinavia, coastal waters; Chrysochromulina, polylepis, unusual bloom in 1988; environmental conditions and ecophysiological mechanisms behind bloom 1601
spring; Antarctic Peninsula; Bransfield Strait, region; glutamate, assimilation patterns; thymidine, assimilation patterns 1652
blue-green algae; phosphorus, release from sediments; pH, effect of 2228
Arabian Sea, NW; monsoon, SW, 1979 2671
Gulf Stream, filaments, carried on; Dinoflagellata; Gymnodinium, breve; red tides, expatriate 2834
Adriatic Sea, July 1984 3161

blooms: picoplankton
May-June 1988; Skagerrak; Kattegat; Chrysochromulina, polylepis; environmental conditions, possible causes, effects; ICES workshop report 949

blooms: plankton
Maine; Gulf of; Coccolithophoridae; biological and optical properties of the bloom 1692
spring; Newfoundland; bacteria, responses; temperature; substrates, concentration 2261

blowouts (More at OIL POLLUTION ...)

Bo Hai
China; currents, tidal and residual; baroclinic flow; model; in Chinese, English abstract 33
Sea, S; China; Huanghai Delta; sediments, near-surface; mass physical properties 824
Yellow Sea; radioactivity, in coastal waters 1322

BOD (More at oxygen ...)

Bogidiella
(Stygogidiella) atlantica n.sp.; Canary Islands, W, interstitial waters; Amphipoda; stygofauna 2289

bogs
blanket; coastal fogs; evaporation 2538

bolide impacts
giant; Earth; thermal equilibration modelled 2175
asteroids, near miss, January 1991 2892

Bombay
India; heavy metals, distribution; pollution; seawater; particulates 3037

Boston Harbor
Massachusetts; sedimentary environments, modern 2023

Botany Bay
Australia, NSW; Centrostephanus, rodgersii; mass mortalities; sea urchins; resultant changes in subtidal habitat 1632

Bothnian Sea
Baltic Sea, N; Mytilus, edulis; cadmium; zinc 2315

Bothromaia
griffini n.gen., n.sp.; North Pacific; Mariana Islands; Brachyura, majid; Homoloidea, poupiniid; Poupinia, hirsuta, remarks on 2294

bottom (More at FLOOR ...)

bottom boundary layer (More at BOUNDARY LAYERS ...)
California, N, shelf; upwelling, regions 1154
processes; seabed, measurements at; instrumentation 1159
asymmetric behavior above a sloping bottom 1233
hydrophysical surveys 1767

bottom circulation
Arabian Sea; Somali Basin 12

bottom currents (More at CURRENTS ...)
Canary Upwelling, vicinity; upwelling, areas, dynamics ... 1152

bottom friction
term; tides, propagating in channels; compact approximations . 681

bottom layer (More at LAYERS ...)

bottom pressure
West Spitsbergen Current; Arctic Ocean; currents, seasonal variations 1806

bottom relief (More at RELIEF...)

bottom samplers (More at SAMPLERS ...)

bottom sampling (More at SAMPLING ...)

bottom seismometers (More at seismometers ...)

bottom temperature
Newfoundland, off; Grand Bank; implications for exchange rates 627

bottom topography
sloping, over; vorticity fronts, evolution 1166
fluid dynamics; friction, effects in rotating flow 1242
spinup; circulation; abyssal basins 1774
periodic; internal waves, scattering 1841
Arctic Ocean; seafloor, relief; new orographic map 2017

bottoms: porous
gravity waves 1824

boundary currents
Arabian Sea, Basin 27
western; flow, nonlinear, near a corner 31
California, N, off; coastal zone, transition; currents; boundary; filament formation and evolution, dynamical simulations 669
coastal; density fronts; instability and nonlinear evolution; in Japanese, English abstract 1167
extensions; Rossby waves, stationary 1172
western; equatorial undercurrents; relationship 1807
surface; Algerian Current, application to; lab study 2410

boundary layer<s> (More at ATMOSPHERE, FRONTS, LAYERS, OCEAN ...)

boundary layer: atmospheric
marine; humidity, variability in and above the MBL 1899
marine; eddies, flux parameterizations and variability of boundary conditions 1916

boundary layer: benthic
sampling, water-, new device 173

boundary layer: bottom
California, N, shelf; upwelling, regions 1154

processes; seabed, measurements at; instrumentation 1159
asymmetric behavior above a sloping bottom 1233
hydrophysical surveys 1767
boundary layer: Ekman
theory of; fluid dynamics; nonlinear boundary conditions ... 1892
boundary layer flow
fluid dynamics; ordered and chaotic states following separation 1236
boundary layer: marine
cloudsopping; diurnal variation 150
Gulf Stream; atmospheric circulation, mesoscale; numerical simulation of cold air outbreak 763
dimethylsulfide, effects of; aerosols, marine, concentrations 770
evolution; U.S., SE, off; cold air outbreaks, during 1282
Baltic Sea, Swedish coast; atmospheric circulation; observations 2526
clouds, stratiform, formation 2534
boundary layer: monsoon
convective mixing, atmospheric 750
boundary layer: surface
observations; model output to monitor data quality 732
boundary layer: turbulent
low-Reynolds-number 1241
boundary layers
western; circulation; currents; viscous instabilities 1801
boundary mixing
model 1885
gravity currents; propagation along an incline 2413
boundary sediments
Cretaceous-Tertiary boundary; Alberta, (Canada); diamonds, nm-size 835
Boussinesq approximation
asymptotic aspects; fluid dynamics; gases; liquids 1238
Brachiopoda
migration; North Atlantic; Bivalvia; climate change, response to 2105
shells, calcite, influences on composition; fossil record; paleoceanography 2605
Brachyura
Callinectes, sapidus; foraging, density-dependent, and mutual interference; predation, on infaunal clams 470
majid; North Pacific; Mariana Islands; Bothromaia, griffini n.gen., n.sp.; Homoloidea, poupiniid; Poupinia, hirsuta, remarks on 2294
Wadden Sea; Carcinus, maenas, abundance after winter; tidal flats 2799
Majoidea, classification; Macrocheira, kaempferi, redescription 2804
Callinectes, sapidus, by; salt marshes, intertidal zone 2806
larvae; California, central coast; coastal embayments; seasonal occurrence, abundance 2810
South Africa, E coast; Ocypodidae; ghost crabs 2812
North Carolina, Pamlico River; Callinectes, sapidus, microhabitat selection by premolt and molting crabs 2820
Chesapeake Bay, marsh; Callinectes, sapidus; population dynamics 2823
Australia, NW, Kimberley region; Thalassinidea; Anomura; 175 taxa 3191
majid; Atlantic, W; Mithrax; Mithraculus 3194
brackish water (More at WATER ...)
Bransfield Strait
W, region; Antarctica; water masses; geostrophic circulation 1132
Antarctica; organic matter, production; particle flux; seasonal coupling 1337
region; Antarctic Peninsula; phytoplankton blooms, spring; DNA, dissolved and particulate, dynamics 1585
region; Antarctic Peninsula; phytoplankton; primary production 1595
Antarctic Peninsula; larval fish; distribution and abundance 1599
Antarctic Peninsula; phytoplankton, observations, modelling; mixing, depth, relationship to 1603
region; Antarctic Peninsula; glutamate, assimilation patterns; thymidine, assimilation patterns; phytoplankton blooms, spring 1652
region; Antarctic Peninsula; microbial biomass; productivity 1655
region; Antarctic Peninsula; Euphausia, superba; krill, distribution and population structures of immature and adult krill 1673
region; Antarctic Peninsula; Euphausia, crystallorophias; krill, development rates and habitat shifts 1674
region; Antarctic Peninsula; Euphausia, superba; krill, growth and early development, mesoscale variation 1678
and Gerlache Strait; Antarctic Peninsula; Drake Passage; Euphausia, superba; krill; depth relationships of eggs, larvae and adults 1684
Antarctica; Research on Antarctic Coastal Ecosystem Rates, project objectives and results 1722
Antarctica; bacteria, number, heterotrophy, extracellur enzyme activity 2743
Brazil
Amazon River, shelf and delta; shelf sediments; AmasSeds study 579
NE; shelf sediments, sandstream; survey 611
SE, Paranagua Bay; Spartina, alterniflora, influence of; macrobenthos, structure and temporal variability of associations 987
Cirripedia; Coronuloidea, from the coast; Stomatolepas, redescribed 2296
Rio Grande do Norte; zooplankton; oil platforms, around . 2693
coastal region; pollution; cadmium; zinc 3036
Brazil Basin
Atlantic; Cape Verde Basin; magnetic field, structure ... 333
South Atlantic, NW; sediments, estimating sound velocity and velocity ratio 2588
breaking waves
run-up 1826
and shoaling; shoals, over 1830
surface; fractal structure of breaking zones 1835
sound, generated by; acoustics 1869
bubbles, generation, entrainment; temperature, effects 1877
microwave backscatter; detection and verification 2437
microwave backscatter; dependence on wind and wave conditions 2438
breakwaters (More at MARINE STRUCTURES ...)
design; engineering; design, structural strength considerations; overview of recent research; 9 papers 584
breezes (More at WIND(S) ...)
land, sea; gravity currents, atmospheric; sea breeze fronts; inland penetration, Kelvin-Helmholtz billows 754
sea and river, interactions; coastal zone, area of complex heating 755
land and sea circulations; wind, large-scale, effect of; numerical investigation 1286
breezes: sea
land, masses, width of; relationship 1287
developing circulation; pollutant deposition, dry, modification 1948
features; Spain; Barcelona 2964
brightness
spectral coefficients; water bodies, emission spectra; seas; oceans; possible applications to remote sounding 1124
brine seeps
abyssal; Mexico; Gulf of; Florida Escarpment, base of; biogenic methane 826
brines: hot
Red Sea; report 1117
Bristol Channel
U.K., S Gower coastline; chlorophyll, -a, mapping; remote sensing, airborne thematic mapper 2213
Britain (Use Great Britain)
British Columbia
Quaternary, Late; Fraser River, Delta; Foraminifera, biofacies succession 848
Knight Inlet; sediment porosity; determinations using a transient electromagnetic system 1388
Georgia; Strait of; microplankton communities; patchiness; mosaicism 1592
Georgia; Strait of; heavy metals, Pb, Zn, Cu, Cd; carbon; nitrogen; sediments, accumulation in 1991
NW; Alaska, SE; Canada; geophysics; geology; symposium 2012
Canada, W; shelf sediments; geochemistry 2061
Atlin Lake, to; Alaska, Sitka Sound, from; continent-ocean transitions; crust; northern Cordilleran transect 2152
Canada, W; shelf ecosystems; benthic biology 2240
British Isles (See also Great Britain, U.K.)
British West Indies
Caicos Platform; Florida, S; sediments, generation of fabrics and facies; burrow networks, faunal, excavation and storm infilling 1383

Pine Cay; Isopoda, 4 n.spp. 1680
Pine Cay; Isopoda; Armadilloniscus, steptus n.sp. 1685
bubble<s> (More at GAS ...)
bubble curtains
and jets, generated by; currents, surface, and recirculating cells 1076
bubble plumes
acoustic scattering 93
bubbles
clouds, from; acoustic scattering 100
clouds; seawater; light scattering, sunlight; colors observed . 703
spherical, parametric response 714
generation, entrainment; temperature, effects; breaking waves 1877
role; air-sea interface; gas exchange, in near-saturation conditions 1965
bubbles: air
fluid dynamics; release from an underwater nozzle 1244
bubbles: bursting
organic matter, marine, effects of; aerosols, sea-salt 1944
bubbles: gas
movement; sediments, fine-grained, unsaturated 300
Bullard Fracture Zone
South Atlantic; seafloor; spreading ridges, tectonic fabric 1364
buoyancy
circulation; wind-driven flow 11
effects; currents; velocity shear; nonlinear interactions in a stratified fluid 1879
buoyancy transport
mixed layer, dynamics 1229
buoyant jets (More at JETS ...)
buoys (See also sonobuoys; more at OCEANOGRAPHIC APPARATUS ...)
ships, for use on; instrumentation; humidity, intelligent chilled mirror humidity instrument 733
drogued, drift pattern; North Atlantic, NE, East Thulean Rise; eddies, field of flow 1160
buoys: drifting
currents, measurements; Decca Navigator, Argos 1810
buoys: wave
Wavescan second generation directional buoy 50
burning
proposed as possible cleanup technique; Arctic area; oil spills; report 1755
burning: biomass
fossil fuels; climate, effects on; heating or cooling? 134
burrow networks
faunal, excavation and storm infilling; Florida, S; British West Indies, Caicos Platform; sediments, generation of fabrics and facies 1383
bursting bubbles
organic matter, marine, effects of; aerosols, sea-salt 1944
Buzzards Bay
Massachusetts; coastal sediments; carbon cycling, estimating remineralization 1984

C-14 method
primary production; interlaboratory comparison 453
cables (See also ROPES ...)
cables: transoceanic
remote sensing, from above and below; value of retired cables to research 1721
Cadiz: Gulf of
Gibraltar: Strait of; Mediterranean area; water masses, exchange; mixing; volume transport 672
waters; Spain; trace metals, enrichments 797
cadmium
origin of high loads; Australia, W; Shark Bay; Bivalvia, in; particulates, uptake with 557
bioaccumulation; Hawaii; Bivalvia; Isognomon, californicum 564
sublethal effects; Mysidacea; Leptomysis, lingvura; toxicities, to respiratory metabolism, nutrition, excretion, hydrolase activity 1034
Appendicularia, retention in houses; zinc 1347
Bothnian Sea; Baltic Sea, N; Mytilus, edulis; zinc 2315
Brazil, coastal region; pollution; zinc 3036
Cainozoic (Use Cenozoic)

Calanoida
Pseudodiaptomus, hessei, in a warm temperate estuary; productivity, secondary; population dynamics 1006
Cyclopoida; zooplankton; long-term experiments on interactions 1012
Cyclopoida; phytoplankton; zooplankton; short-term experiments on interactions 1013
in heterogeneous environment; Acartia, tonsa; Eurytemora, affinis; competition; coexistence, predator-mediated .. 2280
Greenland Sea; distribution in late fall 2809
Aden; Gulf of, deep; Pterochirella, tuerkayi n.gen., n.sp. .. 3193
Calanoides
acutus, dynamics; Antarctica, coastal waters; Copepoda ... 1679
carinatus; Benguela Upwelling, S; Copepoda; zooplankton, meso-, abundance, distribution, production 2697
carinatus, fecundity; Benguela Upwelling, S; Copepoda; zooplankton 2798
Calanus
finmarchicus, phenology; Copepoda; hypotheses about control mechanisms 517
euxinus, new name for C. ponticus; Copepoda 2282
n.sp.; South Africa; Copepoda 3184
calcareous algae
xenobiotics, fate in 1038
calcareous biota
isotope paleontology; growth and composition of extant species 2113
calcareous deposits
bacteria, effect of 485
calcareous nannofossils
Pacific, W; Eniwetok Atoll; Foraminifera, planktic 2591
Eocene, Mid-, to Lower Miocene; South Atlantic, subantarctic; magnetobiochronology 2620
adaptation of the random settling method for quantitative studies 3078
calcareous sediments (More at SEDIMENTS ...)
calcareous shells
and tests; microscopy, preparation for using hydrofluoric acid 3081
calcification
coral reefs; photosynthesis; alkalinity, anomaly technique 3166
calcite (More at CARBONATES ...)
magnesian; Sargasso Sea, fluxes to; aragonite; seawater .. 212
sources and transport; Pacific, deep water; suspended matter 1977
calcite lysocline
modelling 1380
calcium
content; Bivalvia; Donacilla, cornea; heavy metals, accumulation 1709
calcium carbonate (More at CARBONATES ...)
preservation; Pliocene, and Pleistocene; Pacific; oxygen, O-18; paleoceanographic and paleoclimatic implications .. 1425
content; Arabian Sea, cores; Indus River; river discharges, influence; sediments 2088
calderas
Italy, W of Naples; Campi Flegrei; volcanism; collection . 2144
California
coastal; Baja California; paleomagnetism; tectonics, transport, alternatives to 352
southern; crust, kinematics; faulting; seismicity 400
Palos Verdes shelf; benthic macrofauna; standing crop long-term dynamics 471
shellfish poisoning, paralytic; prevention program 1927-89 .. 588
N, off; current jets; coastal zone, transition area, dynamics; nonlinear finite amplitude behavior 651
coastal flow, near-surface; statistical properties 653
N, off; currents; water masses; coastal zone, transition; summer 1988 studies 656
N, off; current jets, coastal; linear stability analysis of the coastal transition zone jet 661
N, off; coastal zone, transition area, dynamics; flow, assimilation modelling studies; currents 665
N, off; coastal zone, transition; current filaments, cold; structure, dynamics 667
N, off; coastal zone, transition; boundary currents; currents: boundary; filament formation and evolution, dynamical simulations 669
N, off; currents; coastal zone, transition, structure; frontal jets 671
N, off; Point Arena; current filaments, cold; physical structure June 1987 673
Loma Prieta 1989; Moss Landing, Harbor; waves, short-period, generation; landslides, as caused; earthquakes, as ultimate cause 687

N, off; current filaments, subduction; coastal zone, transition area ... 720
Catalina, July 1987; eddies, coastally-trapped; circulation, mesoscale response to synoptic forcing ... 743
central, off; surface temperature; thermal patchiness; patchiness during a wind relaxation event ... 747
S, coastal area; sea cliffs, retreat; sediment failures, mass movements ... 818
Santa Barbara Basin; paleoceanography; sediments, laminated, reflected in carbon isotopic ratios ... 829
Santa Catalina Basin, bathyal; vertebrate carcasses, a whale skeleton; taphonomy, deep-water ... 846
San Nicolas Island, high-energy coast; fossil record; coastal zone; thanatocoenoses, modern ... 850
central, off; phytoplankton pigments, patterns; wind, forcing by ... 921
central, waters off; flagellates, choanoflagellates, abundance and distribution ... 923
N, coastal transition zone; nutrients, distribution, effects; current transport; phytoplankton, biomass, species composition; primary production ... 925
N, off, June 1987; phytoplankton; photosynthesis, light response ... 935
central coast waters; nannoplankton; flagellates, choanoflagellates ... 953
off Point Arena; Copepoda; Eucalanus, californicus, jet role in aspects of secondary production; current jets ... 1011
San Francisco Bay; trace elements; organochlorines; content in surf scooters, 1985 ... 1042
central coast 1980-86; seabirds, dead; marine mammals; patterns of carcass deposition ... 1048
San Francisco, 1906; earthquakes; tsunamis, origin ... 1107
N coast; coastal currents, and filaments; the Coastal Zone Transition Program; collection; 23 papers ... 1112
N, off; coastal upwelling; phytoplankton, transport; water masses, subduction ... 1114
S, off; Santa Monica Basin; San Pedro Basin; basin circulation ... 1127
N, shelf; bottom boundary layer; upwelling, regions ... 1154
off; Santa Monica Basin; eddy diffusivity; current shear, and strain; CTD profile results ... 1228
Tomales Bay; land-sea interface; ecosystem heterotrophy; metabolism; C-N-P stoichiometry ... 1333
N; thermoluminescence dating; coastal sediments ... 1385
Russian River, off; shelf sediments ... 1389
Moss Landing, onshore and offshore sediments; sediment liquefaction; earthquakes, during the 1989 Loma Prieta quake ... 1526
intertidal zone; infauna, distribution; macroalgae, seasonal blooms, effects of ... 1636
Palos Verdes shelf and Santa Monica Bay; sediments; toxicities, profiles; organic matter; contaminants, chemical ... 1996
borderland; Santa Catalina Basin; sediment mixing; conservative tracer study ... 2041
Borderland; Santa Barbara Basin; trace metals, accumulation; sediments ... 2068
ophiolites, Trinity; crust, fossil slow-spreading center; hydrothermalism; isotope evidence for multistage hydrothemal alteration ... 2077
off, between the Mendocino and Murray fracture zones; Tertiary, Late; seafloor spreading, system evolution; tectonics ... 2132
Loma Prieta, 1989; earthquakes; collection ... 2644
shelf; Santa Maria Basin; meiobenthic communities ... 2711
San Diego Trough, microtopography; Harpacticoida, mudballs built by; Tharyx, luticastellus; flow, effects ... 2805
central coast; Brachyura, larvae; coastal embayments; seasonal occurrence, abundance ... 2810
S; San Pedro Basin; San Nicolas Basin; basin flushing ... 2899
Monterey Bay; waves, nearshore field; energy density directional spectra ... 2916
Cyclopoida; Halicyclops, revision and 1 n.sp. ... 3185
tin; tributyltin; toxicities; oysters, field bioassay approach to monitoring ... 3216
San Diego Bay; tin; tributyltin; biomonitoring ... 3219
N, off; current jets; phytoplankton; biomass transport; cool filament chemical and biological structure ... 3255

California Current
system, and tributaries; Pacific; Atlantic; oceanography; special tribute issue for Joseph Reid; 25 papers ... 632
system; current filaments, cold, nature of; coastal zone, transition ... 674
zooplankton communities; pattern associated with a cold filament ... 940
Copepoda; Metridia, pacifica; population dynamics, genetic response; eddies, coastal, response to ... 1003
system energetics modelled; circulation; currents ... 1794

California: Gulf of
Guaymas Rift; hydrothermal deposits; nature of naphthoids ... 424
atmosphere, lower, winter and summer conditions and variations ... 1284
surface temperature, variability; ocean-atmosphere interactions; tidal and atmospheric forcing of the upper ocean ... 1915
temperature, variability; El Niño, recent, strong; sediment diatom record ... 2512

Callianideidae
examination ... 2283

Callinectes
sapidus; Brachyura; foraging, density-dependent, and mutual interference; predation, on infaunal clams ... 470
sapidus postlarvae, predation on; Decapoda; Crangon, septemspinosa, by; Palaemonetes, pugio, by ... 2288
sapidus, by; Brachyura; salt marshes, intertidal zone ... 2806
sapidus, microhabitat selection by premolt and molting crabs; North Carolina, Pamlico River; Brachyura ... 2820
sapidus; Chesapeake Bay, marsh; Brachyura; population dynamics ... 2823

Campanian-Maastrichtian boundary
Germany, NW, Lagerdorf-Hemmoor; North Atlantic, E, DSDP sites 548A, 549, 551; biostratigraphy, correlation; paleobiogeographical and -oceanographical implications ... 2109

Campeche Bank
Mexico; Gulf of; bacteria; oil fields ... 1659
Caribbean Sea, off Mexico; Siphonophora, populations; upwelling zones ... 2785

Campi Flegrei
Italy, W of Naples; volcanism; calderas; collection ... 2144

Canada
Saint John River; tidal hydraulics ... 42
SE; Beaufort Sea; barrier islands, and spits, migration ... 255
off, Flemish Pass; sediment geotechnical properties; effects of biological processes on strength and consolidation properties ... 281
NE; Baffin Island; carbonate sediments, vuggy crust; hydrocarbons, seepage, formed by ... 291
Halifax Harbor; shoreline litter ... 595
Laurentian Channel, variability in; internal tides ... 1198
Saint Lawrence Estuary; metals, dissolved and particulate, distributions ... 1343
Hudson Bay, eastern; gravity field; implications for a flexural origin for the Nastapoka Arc ... 1459
offshore; Jeanne d'Arc Basin; lithospheric heat flow; crust ... 1472
fish; mammals, marine; endangered species, and rare; status reports ... 1733
W coast; shelf currents; mixing; physical oceanography ... 1763
continental shelves; physical oceanography; symposium overview ... 1764
E; shelf circulation ... 1785
E, Scotian shelf; organic matter, sources; shelf sediments, and slope ... 1973
Alaska, SE; British Columbia, NW; geophysics; geology; symposium ... 2012
NW; geology, surficial; shelf sediments ... 2013
shelf sediments; symposium review of surficial geology ... 2015
E shelf; sediment transport ... 2030
Scotian shelf; Emerald Basin; shelf sediments; deposition and diagenetic alteration ... 2031
W; Beaufort Sea; shelf sedimentation ... 2033
shelf sediments, dynamics; symposium review ... 2034
E; seabed geology; shelf sediments ... 2036
E; Arctic area; shelf sediments; surficial geology ... 2047
W; shelf sediments ... 2050
E; shelf sediments; pockmarks, gas-related; gases, vents ... 2055
E; Quaternary, Late; Nova Scotia, off; shelf sedimentation; sea level, changes ... 2056
W; British Columbia; shelf sediments; geochemistry ... 2061
W; Beaufort Sea; shelf sediments; chemical interactions ... 2062
Arctic area; tidewater glaciers; sedimentation, glaciomarine ... 2069

W; Porifera; sponge bioherms; shelf 2104
E; Eocene, Late; Oligocene; Newfoundland, NE shelf; Foraminifera, assemblages; paleoecology 2111
W; Quaternary, Late; tectonics; shelf sediments; glacial troughs 2126
Scotian shelf; sediments, shales; petroleum potential; petrophysical characteristics 2187
W; British Columbia; shelf ecosystems; benthic biology 2240
E, off; shelf sediments; oxygen, benthic consumption 2245
shelf communities; benthic ecology; symposium review .. 2250
shelves; seabed; sediments; shelf communities; symposium proceedings 2350
Arctic area; shelf exploration; engineering, concerns; oil 2354
E; trawling, effects; dredging, effects; ocean dumping; shelf 2360
development; Arctic area; radar imagery, role; background, applications 3229

Canada Basin
Arctic Ocean; water masses, age of deep waters; primary production, way to estimate 3257

Canary Islands
W, interstitial waters; Amphipoda; Bogidiella, (Stygogidiella) atlantica n.sp.; stygofauna 2289
North Atlantic; mantle, shallow, enriched; volcanic rocks, compositions 3117

Canary Upwelling
vicinity; upwelling, areas, dynamics; bottom currents 1152

canyons: submarine
Spain, NE coast; coastal flow, modification 14
development; Izu-Bonin Arc, forearc; Aoga Shima Canyon 2019

Cape Cod
Massachusetts; water resources; pollution; problems reaching crisis proportions 619
to; Bermuda, from; surface height, mean; geoid; satellite data 2622

Cape Hatteras
N of; Gulf Stream; North Atlantic, NW; currents; water masses 35
N of; Gulf Stream; water masses, discharged 2940

Cape Verde Basin
Atlantic; Brazil Basin; magnetic field, structure 333

Cape Verde Frontal Zone
characterized; North Atlantic, E; water masses; fronts ... 678

capillarity
effects in a cylindrical container; gravity waves, surface; wetting boundary conditions 2430

capillary waves
gravity-; long waves, surface; effect of nonlinear damping on interactions 62

capillary waves: gravity
steep; ripples, excitation; numerical simulations 1190

carbohydrates
signatures, and dissolved degradation products; aquatic macrophytes; determinations 2308
seawater; amino acids; chemical analysis; sample handling and analysis 2980

carbon (See also radiocarbon ...)
DOC stable isotope ratios; interstitial water; natural waters, marine 167
organic; marsh soils; nitrogen, total; loss on ignition and Kjeldahl digestion, calibration 171
World Ocean; oxygen; sulfur; interrelationship between temporal trends in isotopic curves 220
organic, and opal; Weddell Sea, S and E; sediments; diagenesis, early; in German, English abstract 274
organic; Taiwan Strait, central and northern; sediments, distribution characteristics in; nitrogen, total; phosphorus, total; in Chinese, English abstract 288
nitrogen; phosphorus; biogeochemistry; U.S. report to IUGG 795
isotopic record, variations; Quaternary; sediments; seawater; organic matter 842
budget, role in; North Atlantic, surface waters; phytoplankton 952
utilization; ammonium, regeneration; bacteria, by, grown on mixed substrates 989
nutrients, status; nitrogen; sulfur; sediments, recorded in . 1330
exchange; Okhotsk; Sea of; sediment-water interface ... 1344
and oxygen isotope time series; Caribbean Sea; Scleractinia; Montastrea, annularis; corals 1379
organic; Black Sea, geochemical relationships; sediments; sulfur; iron 1387
organic, cycles; Quaternary, Late; Labrador Sea; productivity, paleo- 1440
nitrogen; planktonic food webs; size-based dynamics 1604
Skagerrak; plankton, uptake, intracellular storage (nitrate); nitrogen 1610
cycling; submarine caves; oxygen, benthic, uptake; effect of aphotic and resource-limiting conditions 1637
sources; amino acids, isotope dilution as tracer; nitrogen, sources; bacterioplankton, in 1664
organic matter, dissolved; calculated vertical profile in the ocean 1969
British Columbia; Georgia; Strait of; heavy metals, Pb, Zn, Cu, Cd; nitrogen; sediments, accumulation in 1991
C-13 rich; food webs; diatoms, as sources 2212
-13 composition; plankton; history of studies 2227
cell; chlorophyll pigments; nitrogen, cell; nannoflagellates, growth rate 2676
metabolism; Weddell Sea; epontic algae; photosynthesis, -irradiance relationships 2680
humic acids; nitrogen; high temperature combustion determinations 2979
particulates; nitrogen; sulfur; determinations 2995
particulates; nitrogen; phosphorus; analysis procedures .. 3010
particulates, rapidly sinking; nitrogen; analytical determinations 3012
particulates, and total mass; nitrogen; phosphorus 3021
organic; Italy; Venice Lagoon; sediments, and resuspended sediments; nitrogen, organic; PCBs, contamination, relation with 3038

carbon cycle
Prymnesiophyta; Phaeocyctic, blooms, importance; polar seas 950
global; World Ocean; atmospheric carbon dioxide; glaciation, during, pCO_2 reduction 1263
oceanic, impact on; organic matter, DOC; photochemical degradation 1348
ocean-atmosphere interactions; oxygen cycle; silicate weathering, importance as control 1350
oceanic; organic matter; chemical studies; lecture 1967
estimating remineralization; Massachusetts; Buzzards Bay; coastal sediments 1984

carbon decomposition
organic; North Pacific; carbonate dissolution, rates 217

carbon dioxide
production; air-sea interface; surface microlayer; in French, English abstract 198
exchange; Pacific, W equatorial; air-sea interface; in Chinese, English abstract 199
changes; surface temperature, tropical; paleoclimate; relationships 738
dynamics; Cenozoic, Late; climate change; paleoclimate; ice, global mass; temperature; first-order global model .. 741
transport, fluxes; air-sea interface; effect of coupling of heat and matter fluxes 746
Cretaceous, Mid-; mantle plumes, superplumes; global warming 1421
control on C isotope fractionation; photosynthesis, aqueous; a paleo-pCO_2 barometer 1430
exchange; South Pacific; air-sea interactions; seasonal fluxes 2513
production; surface microlayer; glucose, uptake; radiation, UV and visible, influence of 2728
and sulfur degassing; Iceland, Lakagigar, 1783; volcanic eruptions; lava, largest flow on earth 3105

carbon dioxide: anthropogenic
Weddell Sea, transport into 1271

carbon dioxide: atmospheric
plants, aerial fertilization effect; greenhouse effect, implications for; climate warming 133
possible effects on; iron fertilization 794
World Ocean; carbon cycle, global; glaciation, during, pCO_2 reduction 1263
gradual changes; ocean-atmospheric interactions, coupled model; model transient responses 1277
calculating future concentrations 1295
Greenland Ice Sheet, as record, 1530-1940; ice cores, trapped in 1297
increase; ocean-atmosphere interactions; global warming; GCM simulations analyzed 1747

global temperature; silicate weathering, effects of 1904
seawater, heat of solution in 1964
global emissions; mitigation, options; preliminary assessment . 2370
a biological approach to slowing the increase 2388
carbonates; silicates; global shifts in chemical weathering and decarbonation 2389
biota, marine, role as sink; comment 2507
Antarctica; Vostok; paleoclimate; ice cores 2508
paleogeography; global temperature, surface; coupled model with latitudinal contrast 2612
climate change 2951

carbon fixation
light-independent; Antarctica; macroalgae, endemic; photosynthesis; respiration, dark 2306

carbon: ice age
Pleistocene; carbon storage and transfer between marine and terrestrial reservoirs 1116

carbon: inorganic
total dissolved; analytical system for accurate, continuous measurement 2556

carbon monoxide
Sargasso Sea; methane; seawater, distributions and consumption in 200
greenhouse gases; atmosphere; methane 2549

carbon sedimentation
eutrophication, gradients; anaerobic respiration; seasonal patterns 475

carbonate<s> (See also calcium carbonate; calcite, limestones ...)

carbonate dissolution
South China Sea; sediments; in Chinese, English abstract .. 205
rates; North Pacific; carbon decomposition, organic 217

carbonate minerals
Caribbean area, Nicaragua Rise vs the Bahamas; sediments; water column; mineralogy and chemistry 2052

carbonate nodules
coralline algae; rhodoliths, deep-water, distribution, productivity and growth history 1689

carbonate platforms
rudist-bearing, demise; Cenomanian-Turonian boundary; sedimentary environments, change in 1376
mid-oceanic; Pacific, examples from; seamounts; islands, as oceanic dipsticks 1378
prograding margin; Australia, S, off; Great Australian Bight shelf edge; sediments 1394
retreat; Caribbean Sea; tectonics, responses to 2100

carbonate precipitates
$CaCO_3$; bacteria, as inducers; mineralogy, and medium viscosity; relationships 268

carbonate sediments (More at SEDIMENTS ...)
vuggy crust; Canada, NE; Baffin Island; hydrocarbons, seepage, formed by 291
equatorial; paleoclimate, reconstruction; extraction of high-resolution carbonate data 318
shallow-water; Eniwetok Atoll; strontium, isotopic variation; stratigraphic, chronostratigraphic, eustatic implications 841
subtidal; shoreline dynamics; implications for allocyclic vs autocyclic controls 1382
Pleistocene, Late; Pacific, W equatorial; Ontong-Java Plateau 1442

carbonates
geochemical system, as descriptor and differentiator; North Pacific, W; water masses 37
enrichment, hurricane-induced; Florida, Sarasota Bay; coastal sediments; shoreline dynamics 1368
atmospheric carbon dioxide; silicates; global shifts in chemical weathering and decarbonation 2389

carbonyl sulfide
annual variation; Indian Ocean, S; atmosphere 1296

carcasses: vertebrate
a whale skeleton; California; Santa Catalina Basin, bathyal; taphonomy, deep-water 846

Carcharodon
carcharias; South Africa; sharks, great white, protection program 2872

Carcinus
maenas, abundance after winter; Wadden Sea; Brachyura; tidal flats 2799

Caretta
caretta; sea turtles, hatchling loggerheads; orientation, off dark and artificially lighted beaches 462

Caribbean area
pelagic sediments; tectonics, history 310
climate change, over past 10,500 yr; reconstruction 837
petroleum exploration; hydrocarbons, geologic rationale . 910
Panama, coast; oil spills, major; corals, reef-, subtidal; short-term ecological consequences 1035
Nicaragua Rise vs the Bahamas; carbonate minerals; sediments; water column; mineralogy and chemistry .. 2052

Caribbean Plate
North American Plate; plate tectonics, kinematic models; plate boundary zone 363

Caribbean Sea (See also narrower geographic physiographic and zonal designations ...)
Cayman Trough, SeaMARC II mapping; transform faults 357
Lias, to present; tectonics, geodynamic reconstructions; crust 371
Swan Islands; Neogene, development of the restraining-bend complex; tectonics; fault zones 840
NE Caribbean Plate boundary zone; sedimentary basins; petroleum potential 909
petroleum potential; hydrocarbons, reserves; 7 papers ... 911
Barbados, evolution; tectonics; hydrocarbons, evolution; accretionary terranes 912
Scleractinia; Montastrea, annularis; corals; carbon, and oxygen isotope time series 1379
Barbados, prism; margin sediments; clay diapirism 1392
islands, tracing their basic roots 1756
carbonate platforms, retreat; tectonics, responses to 2100
Tertiary; Hispaniola; neotectonics; fault zones, Trans-Haitian; tectonics 2128
during spring bloom; saline fronts; microplankton; trophic dynamics, structure 2211
Belize; Malacostraca; Paranebalia, belizensis n.sp. 2287
Amphipoda, gammarid; Netamelita, 2 n.spp. 2292
W; bacteria, oil-degrading; petroleum biodegradation; currents, and oil inputs 2324
oral reefs; reefs: coral; diseases, Black Band Disease 2784
off Mexico; Campeche Bank; Siphonophora, populations; upwelling zones 2785
Mexico: Gulf of; lithospheric heat flow; comments 3084
North Atlantic; Decapoda, shrimps; Pasiphaeidae, including 1 n.sp. 3188
Colombian coast; Thalassinidea, callianassid; Lepidophthalmus, sinuensis n.sp.; ecology, impact on commercial culture of penaeids 3224

Caridea
Bermuda; Processa, n.sp. 516
Alpheidae; contributions to knowledge of the family by Albert and Dora Banners summarized 1069

carnivory
selective; Copepoda, as prey; Euphausia, lucens, as predator; zooplankton 1005

carotenoid pigments (More at PIGMENTS ...)

carotenoids
algal pigments; chlorophyll; chemical analysis 2978
particulates, suspended, sinking, and sedimented; chlorophyll; analysis 3020

Carpentaria: Gulf of
Australia; Isopoda, cryptoniscid; larval migration and advection 518
NW; Australia; Natantia; Penaeus, semisulcatus, growth, movement, age structure and parasite infestation (*Epipenaeon ingens*) 2291

Caspian Sea
surface slope, frequency spectra; waves 1180

catastrophism (See also extinction; more at GEOLOGY, EVOLUTION ...)

cathodoluminescence (More at luminescence ...)

cations
major; Arabian Sea; fish; metals, heavy; concentration correlations 3217

Caulerpa
taxifolia; Mediterranean Sea, NW; algae, tropical, invasion by; in French, English abstract 1690

caves: submarine
sediments; organic matter, composition, fate 1346
oxygen, benthic, uptake; carbon, cycling; effect of aphotic and resource-limiting conditions 1637

Cayman Trough
SeaMARC II mapping; Caribbean Sea; transform faults .. 357

cells: eukaryotic
RNA synthesis inhibition; toxicity testing; highly sensitive water assay; in French, English abstract 547

Celtic Sea
metals, Pb, Cu, Cd concentrations, spatial variations; in French, English abstract 228
Cenomanian-Turonian boundary
carbonate platforms, rudist-bearing, demise; sedimentary environments, change in 1376
Cenozoic
Early; Mesozoic, Late; nutrients, oceanic distribution; oxygenation; water masses, limits on warm saline bottom water formation 313
Pacific, W; Tethys; plate tectonics; paleogeodynamic maps 366
Late; climate change; paleoclimate; carbon dioxide, dynamics; ice, global mass; temperature; first-order global model 741
Cretaceous; Bering Sea, W, geology; basin sediments; history 1420
Atlantic; Sierra Leone Rise; lamprophyric volcanism; tectonics; implications for regional tectonics and stratigraphic time scale 1499
Barents Sea, W; erosion; sedimentation 3076
centrifuge modelling
ocean research, potential for use in 576
Centrostephanus
rodgersii; Australia, NSW; Botany Bay; mass mortalities; sea urchins; resultant changes in subtidal habitat 1632
Cephalopoda
Okhotsk; Sea of; general distribution and zoogeography 2237
Atlantic; in German, English abstract 3195
Cerastoderma
edule; Bivalvia; microphytobenthos, influence on 1646
Ceratium
bloom decline; zooplankton grazing; diatoms 3158
Cerianthe opsis
americanus; sediments, bulk carbon and nitrogen balance; tube burrows, decomposition 2248
cerium
diagenetic behavior; Japan; Sea of; sediments; rare earths 1398
anomalies; Sargasso Sea; seawater; comment 1954
cesium
-137, distribution; Italy, Emilia-Romagna coast; Po River, Delta; coastal sediments 270
-137; Sellafield, discharges; Chernobyl fallout; dispersion, marine 1961
Cetacea
bottlenose dolphins; mass mortalities; toxins, brevetoxin; 1987-88 Northwest Atlantic event investigated 960
Baltic Sea, Polish, 1979-1990; notes, observations 964
identifying vocalizing dolphins; dataloggers; vocalizations . 965
bottlenose dolphins; North Atlantic, U.S. coast; chemical residues 1040
commercial fisheries; gillnets, acoustic reflectivity enhanced to reduce entanglement; target strength measurements, implications for incidental dolphin take 1096
commercial fisheries; gillnets, modifications to reduce entanglement; merits of acoustic modifications discussed .. 1097
International Whaling Commission, workshop results; mortalities, incidental to fishing; fishing nets, and traps; report 1099
on; Antarctica; parasite fauna; use as potential stock indicators 1625
beluga whales; Arctic area, off Canada; pollutants, aromatic DNA-carcinogen adducts 1708
Denmark; Greenland; organochlorines; porpoises, harbor 2321
spp.; North Sea; Kattegat; Phocoena, phocoena; mercury, contamination 2322
tuna fisheries, commercial seiners; porpoises, dolphins, protection; vessel registry, foreign-flag; are regulations increasing foreign-flag registration? 2366
sightings; South Africa, off; Agulhas Retroflection, and Subtropical Convergence 2699
whales, reaction; tagging, implanted sonar transponder and radio tags 2701
Cetacean and Turtle Assessment Program (Use CETAP)
Chaetoceros
sp, effects on; seawater; mercury pollution; nutrients, phosphorus-limited conditions; in Chinese, English abstract 569
Chaetognatha
South Africa, W, off; Sagitta, friderici; diel migration, feeding patterns 2230
benthic polar; Antarctica, first record; Spadella 2782
Chagos-Laccadive Ridge
origin and compensation; Indian Ocean; aseismic ridges; gravity field, and bathymetry 2638
chalk
porosity; Tertiary, uplift; Europe, U.K., France; shelf sediments 283
sedimentology; North Sea, Eldfisk Field; sediment diagenesis 2058
chambers (More at HABITATS ...)
Chang Jiang Estuary
China; hydrocarbons, non-aromatic; suspended matter, in; characterization, intraannual variations 807
Chang Jiang River
region; China; surface heat flux, Kuroshio, influence of; rainfall, meiyu 2509
channels (More at COASTS ...)
channels: estuarine
Argentina; Bahia Blanca, El Toro Channel, geomorphological evolution; shoreline dynamics 256
channels: hypersaline
Arabian Gulf, Al-Khiran; Ostracoda, community 2273
channels: sound
parameters; acoustic waveguides, sediment layer 1862
inhomogeneities; acoustic waves, attenuation 1873
chaos theory
strange attractors; plankton, dynamics 2340
applications; climate change; heat transport, oceanic; report 2380
Charlotte Harbor
Florida; estuarine flushing, and residence times 643
chemical analysis
aromatic hydrocarbons, PAH; sediments, and other marine particulates; Shpol'skii fluorometry 174
isotope dilution GC/MS; dimethylsulfide 181
sulfur, elemental 2970
updated determination; thorium, -234, particulate and dissolved 2977
algal pigments; carotenoids; chlorophyll 2978
seawater; amino acids; carbohydrates; sample handling and analysis 2980
particulates 3002
Si, C, N, P; particulates 3004
particulates; sample preparation, and speciation 3014
particulates; review of C:N:P methods 3030
and collection; particulates 3033
reliability; tin, tributyl; water quality, criteria, implications for; seawater 3042
chemical defenses
response to; Copepoda; cyanobacteria, foraging on; resource abundance effects 2276
chemical defenses: plant
herbivores; marine-terrestrial contrasts in ecology 2201
chemical dispersion
oil spills; droplet size distributions, mathematical model 1085
chemical evolution (More at EVOLUTION ...)
chemical hydrography
East China Sea; Kuroshio, NE of Taiwan; variability in the frontal region 777
chemical pollution
North Pacific, W 1998
North Sea, concentrations in; tankers, operational discharges from 2358
chemical residues
North Atlantic, U.S. coast; Cetacea, bottlenose dolphins ... 1040
chemical sensors
odor plumes; instrumentation, submersible 1304
chemical transport
and isotopic; particulates, as vehicle; vertical change index .. 1349
chemicals
HCH, HCB; Amphipoda, Antarctic; Orchomene, plebs; bioassimilation 2317
chemicals: organic
benthic fauna; effects of linear alkylbenzene sulphonate 556
mineralization, in seawater; microbial communities 2778
chemicals: toxic
fate; tropics; editorial 1093
Chesapeake Bay; pollution; viewpoint 2871
international law; shipping liability; carriage of hazardous and noxious substances; development of a liability regime . 2878
chemistry: analytical
environmental monitoring; review 170

spectroscopy, atomic; development, progress 172
natural waters; trace analysis; biennial review of techniques 178
chromatography; spectrometry; pyrolytic analysis; recent developments 2968
standard reference materials; materials and methods 2973
chemistry: atmospheric
review 1298
North Atlantic, W, over; dimethylsulfide, emissions, seasonal variations; sulfur; nitrogen 1938
North Atlantic, over, Dakar to Woods Hole; precipitation, chemistry 1939
chemistry: estuarine
dimethylsulfide, and DMSP; decomposition, dependence on temperature, concentration 2259
chemistry: nutrient
Guam, coastal waters 785
chemistry: precipitation
Indian Ocean, variability over; Amsterdam Island, 1980-87 2541
chemistry: redox
sediments; manganese, MnO_2/Mn^{2+} as potential governing system 1572
chemistry: trace
World Ocean; atmospheric deposition 2510
chemistry: tropospheric
U.S. report to IUGG 767
photochemistry 1294
chemoautotrophic ectosymbionts
Nematoda; sulfides, gradient, novel strategy 2712
chemotaxis (See also pheromones, signal agents, telemediators; more at COMMUNICATION ...)
response to breakdown products of insoluble substrates; bacteria 497
Chernobyl fallout
Sellafield, discharges; cesium, -137; dispersion, marine ... 1961
Chesapeake Bay
Swartkops Estuary; Ems Estuary; Baltic Sea; Peruvian Upwelling; Benguela Upwelling; ecosystems marine; ecology, comparative 918
Ciliata, guilds; zooplankton, micro- 928
Estuary; atmospheric nitrogen, deposition 1086
risk assessment, developing a strategy 1090
hydrogen sulfide; oxidation 1983
plume; nitrogen, organic and inorganic, time-dependent coupling of uptake and regeneration; regulation by large heterotrophs 2571
waters; Ciliata, microphagous, growth rates; Copepoda, consumption by 2677
area; bacteria, Bdellavibrios, halophilic; serogrouping 2768
marsh; Brachyura; Callinectes, sapidus; population dynamics 2823
toxic chemicals; pollution; viewpoint 2871
anoxia; eutrophication; a 2000-yr history 2884
tin; tributyltin; pollution monitoring; statistical modelling of data 3039
Chicxulub Crater
Cretaceous-Tertiary boundary; Mexico; Yucatan Peninsula; impact craters 1428
Chile
along; subduction zones; earthquakes, seismic coupling .. 421
Gulf of Arauco; Dinoflagellata, thecate; diatoms; species composition, abundance, chlorophyll maximum 541
China
Bo Hai; currents, tidal and residual; baroclinic flow; model; in Chinese, English abstract 33
Dongsha Islands; currents, vectors, rotary spectra; time series analysis; in Chinese, English abstract 34
off Zhejiang; coastal upwelling, and fronts 40
Shanghai; sea level, changes since the early 1920s 48
El Niñ0; typhoons, days between first and last landings; annual variation characteristics; in Chinese, English abstract 157
Zhejiang coast; bays, chemistry; seawater 186
Jiaozhou Bay; seawater; phytoplankton; mercury, concentrations, distributions; in Chinese, English abstract . 231
Fujian coast, past 6000 yr; sea level, fluctuations; in Chinese, English abstract 264
Yellow Sea; shelf sediments, accumulation 266
Huanghai Sea, S; fossil record; sediments 325
Jiaozhou Bay; seawater; phytoplankton; sediments; tin, speciation; in Chinese, English abstract 596
Chang Jiang Estuary; hydrocarbons, non-aromatic; suspended matter, in; characterization, intraannual variations 807
Bo Hai, Sea, S; Huanghai Delta; sediments, near-surface; mass physical properties 824
Qingdao; rocky shores, ecology 979
Huanghai River, and Estuary; river runoff; mercury, effects on occurrence, transportation and speciation 1353
Pearl River, Delta; sea level; estuarine circulation, responses; meteorological forcing and river inflow 1371
Huanghai Sea, N; internal tides, effects; currents, tidal, vertical structure 2455
program; meteorological satellites 2495
Chang Jiang River, region; surface heat flux, Kuroshio, influence of; rainfall, meiyu 2509
seas; Ostracoda; Foraminifera; paleobiogeography 2619
historical records; climate change 2952
Huanghai Sea, shelf, formation and evolution on; sand ridges; in Chinese, English abstract 3048
Holocene; Yangtze River; Yellow River; estuaries, development 3068
mainland; Quaternary; sediments; climate, and climate change; paleoenvironments; collection 3069
Yangtze River, influence on middle and lower reaches since 12,100 BP; sea level, rise 3070
SE, fault-sag zones; Mesozoic, -Cenozoic; taphrogenesis, and dispersion; marginal seas 3091
chitin
paleoecology; animal skeletons, component of 1452
biogeochemistry 1668
chitin biodegradation 1663
chitin biomass
and production; in marine environments 1669
chitin mineralization
estuarine sediments; chitosan, pathway, importance of 1667
chitosan
pathway, importance of; chitin mineralization; estuarine sediments 1667
chlorinated hydrocarbons (More at HYDROCARBONS ...)
Adriatic Sea, N; biota, mussels, levels in 2844
chlorinity (More at SALINITY...)
chlorofluorocarbons
Ross Sea; Antarctica; circulation tracers; ventilation, rapid 1136
chlorofluoromethane
Mediterranean Sea, E; oxygen; water masses, interactions 2406
chlorophyll (More at PIGMENTS ...)
-a determinations; natural waters; methods comparison 176
Pacific, equatorial, along 135°N; particulates; organic matter; surface layer 207
early diagenesis; Long Island Sound; sediments; particulates 276
-a determinations; sampling, subsampling errors; natural waters, samples 442
determinations; phytoplankton 455
CZCS observations; sampling, irregularly spaced observations, estimating time averages 926
-a concentrations; Baltic Sea, Patchiness Experiment; plankton; productivity; measurements intercomparison 939
mid-ocean ridges, influences of; productivity; effects on large-scale patterns 954
-a distribution; South Africa; Benguela Upwelling, area; phytoplankton, possible effects on; global warming; fish, pelagic, implications for 1586
-a determinations, problems in; chromatography, HPLC ... 1588
concentration; plankton communities; respiration; relationship 1596
content; sea ice; porosity; relationships 1845
-a concentration; Skagerrak, hydrography; plankton; particle size; relationships 1979
-a, mapping; U.K., S Gower coastline; Bristol Channel; remote sensing, airborne thematic mapper 2213
estimation; remote sensing, CZCS data; efficient algorithm .. 2223
estuaries; nutrients; watershed discharges, variations, effects 2377
-a, quantifying; reflectance, model; in the presence of degradation products 2672
Weddell Sea; sea ice; diatoms, distribution 2674
sea ice; salinity; quantification of properties; in German, English abstract 2923
algal pigments; carotenoids; chemical analysis 2978
particulates, suspended, sinking, and sedimented; carotenoids; analysis 3020
Baltic Sea, trend analysis; productivity; zooplankton, biomass; transparency, water 3149

chlorophyll maximum layer (More at LAYERS ...)
Spain, 3 Galician estuaries; phytoplankton, assemblages; hydrography relationships ... 2679
chlorophyll pigments
and degradation products; spectrofluorometric determinations . 448
organic matter; sediments, preservation in ... 2053
carbon, cell; nitrogen, cell; nannoflagellates, growth rate . 2676
chlorophyll production
enhancement; Gulf Stream; seawater, surface; nitrates, rainwater ... 2234
choruses (More at SOUND, COMMUNICATION ...)
chromatography
HPLC; chlorophyll, *-a* determinations, problems in ... 1588
spectrometry; pyrolytic analysis; analytical chemistry; recent developments ... 2968
chromatography: ion
twenty years' history reviewed ... 1311
chromium
determinations by electrothermal AAS; seawater, estuarine, coastal ... 165
effects; phytoplankton growth ... 566
oxidation kinetics; seawater ... 1956
chronostratigraphy
isochrons, calculating; dating; precision of age measurements by Rb-Sr isochrons ... 2010
Cretaceous-Tertiary boundary, sections, how complete?; sediments ... 2098
linking marine and terrestrial; Pliocene, site; Florida, near Sarasota; fossil record ... 3073
Chrysochromulina
polylepis; Skagerrak; Kattegat; picoplankton blooms, May-June 1988; environmental conditions, possible causes, effects; ICES workshop report ... 949
polylepis, unusual bloom in 1988; Scandinavia, coastal waters; phytoplankton blooms; environmental conditions and ecophysiological mechanisms behind bloom ... 1601
Chukchi Sea
sea ice, thickness; polynyas, measurements in ... 2926
Bering Sea; sea ice; polynyas, location, extent ... 2935
Ciliata
guilds; Chesapeake Bay; zooplankton, micro- ... 928
measurement and simulation of prey uptake; nannoplankton, plastidic vs aplastidic ... 1618
aloricate; Jamaica, Kingston, off; biomass, and abundance . 1686
as widespread source; sediments, tetrahymanol ... 2568
microphagous, growth rates; Chesapeake Bay, waters; Copepoda, consumption by ... 2677
protection from feeding by; sediment bacteria ... 2771
hypotrichous; Oxytricha, bifaria; air-water interface ... 3196
circulation (More at ATMOSPHERE, FLUID DYNAMICS, OCEAN ...)
gyre-driven; eddies, scales, resolution of; baroclinic instability ... 8
wind-driven flow; buoyancy ... 11
numerical models; Mediterranean Sea, as example; climate, data assimilation ... 16
buoyancy-driven; convection, horizontal on β-plane ... 18
North Sea, N ... 19
GCMs; wind, forcing by ... 21
general; ocean-atmosphere interactions; climate, model stability, variability; results of 100-yr simulations ... 132
GCM simulations, sensitivity; climate; moisture transport, formulation ... 135
quasi-geostrophic response; ocean-atmosphere interactions; wind, forcing by ... 141
general; climate change; ocean-atmosphere interactions; heat transport fluctuations vs greenhouse effect ... 612
possible changes; North Sea; salinity, high; exceptionally saline inflows ... 614
eddy transport, and advection; currents; observing with floats ... 636
Hawaiian Ridge, effects of; North Pacific; flow; thermohaline structure ... 645
sea level, global scale surface variability; dynamic topography; altimetric and tide gauge measurements ... 650
changes, possible effects on signal; greenhouse gases; climate change, signals; editorial ... 742
mesoscale response to synoptic forcing; California, Catalina, July 1987; eddies, coastally-trapped ... 743
ocean-atmosphere interactions; dynamic topography; large scale oceanic responses to atmospheric forcing at low frequencies ... 749
East China Sea; numerical study ... 1126
seasonal; Indian Ocean; topography, effects ... 1129
Washington State; Puget Sound; density intrusions ... 1130
currents, accurate measurements using drogued buoys ... 1161
oceanic; climate change ... 1262
Kattegat; Skagerrak; oceanography over the past 8000 yr ... 1436
North Atlantic, W subtropical; currents, seasonal variations; volume transport ... 1768
seasonal variability; North Atlantic; model comparison ... 1772
bottom topography; spinup; abyssal basins ... 1774
Greenland Sea; Norwegian Sea; wind; salinity, the Great Salinity Anomaly in the 1970s; numerical experiments ... 1779
North Atlantic; wind; time and space scales of mesoscale variability ... 1780
wind- and buoyancy-driven; North Atlantic ... 1786
numerical model; Norwegian Sea; Greenland Sea ... 1788
Mediterranean Sea ... 1790
decadal and interdecadal variability; freshwater flux, forcing . 1793
California Current, system energetics modelled; currents .. 1794
boundary layers, western; currents; viscous instabilities ... 1801
general; Pacific, W tropical; air-sea interactions; surface temperature; large-scale interannual and intraseasonal interactions ... 1912
ocean and air; ocean-atmosphere interactions; El Niño, ENSO cycle; weather ... 1918
FRAM model applications; Africa, southern, around ... 2402
Ronne Ice Shelf, beneath; Antarctica ... 2404
seasonal; Bengal: Bay of, upper ocean ... 2405
remote forcing; Bengal: Bay of; ocean-atmosphere interactions ... 2409
ice shelves; water masses; ice-ocean interactions modelled . 2459
Arabian Sea, variability in thermal response; monsoons, response to forcing by; heat flux; air-sea interactions . 2515
GCM simulations; atmospheric oscillations; North Pacific Oscillation, observations; comparison ... 2521
general; ocean-atmosphere interactions; Southern Oscillation ... 2525
general; Southern Hemisphere; wind, subtropical, short-term maxima ... 2528
interpentadal changes diagnosed; North Atlantic ... 2902
GCM response; heat, and water budgets; surface temperature, anomalies ... 2953
tidal and residual; oil spills, simulations; EUROSPILL databases ... 3246
circulation: abyssal
Mid-Atlantic Ridge, eastward flow through, at 11N ... 1131
circulation: atmospheric
response; Pacific, tropical; ocean-atmosphere interactions; surface temperature ... 143
Northern Hemisphere; surface temperature, sensitivity to 144
Hadley; ITCZ; potential vorticity modelling ... 148
paleo-; Quaternary, Late, during summer; Arabian Sea; coastal upwelling ... 322
mesoscale; Gulf Stream; marine boundary layer; numerical simulation of cold air outbreak ... 763
ocean-atmosphere interactions; ENSO predictability ... 1272
Southern Hemisphere; intraseasonal variations ... 1775
Baltic Sea, Swedish coast; marine boundary layer; observations ... 2526
Pacific, tropical, vertical motion over ... 2962
circulation: basin
California, S, off; Santa Monica Basin; San Pedro Basin 1127
mid-depth; Japan, off; Shikoku Basin ... 1135
circulation: bay
Newfoundland, Conception Bay; formulation of open boundary conditions at the mouth ... 1773
circulation: bottom
Arabian Sea; Somali Basin ... 12
circulation: deep
rapid transitions; surface water fluxes, changes in; relationship ... 17
South Atlantic, E ... 648
Samoa Passage, into; Pacific; abyssal flow ... 675
North Atlantic; deglaciation; glacial meltwater, discharges; climate change, abrupt, 15-10 kyBP ... 1432
effects; ocean reservoir characteristics ... 1789
circulation: equatorial
geostrophic flow ... 1776
tropical; North Atlantic, near-surface ... 1783
circulation: estuarine
responses; China; Pearl River, Delta; sea level; meteorological forcing and river inflow ... 1371

South Africa, Palmiet; tides, dynamics 1778
circulation: geostrophic
Bransfield Strait, W, region; Antarctica; water masses .. 1132
circulation: hydrothermal
continental and marine, modelling 1412
mid-ocean ridges; 3-D simulation 1414
mid-ocean ridges; silica, behavior; coupled fluid flow and reaction 1416
spreading centers, along; NOAA's VENTS program 3233
circulation: Lagrangian
fluid dynamics; oscillatory flow 125
Iberian Peninsula; North Atlantic, E; coastal zone, transition; currentsbservations 639
circulation modelling
global climate, system sensitivity; impact of initial conditions . 136
advection, numerical schemes; influence on GCM results 637
satellite altimetry, Seasat; recent studies reviewed 642
snow; climate, feedback; feedback interpretations in 17 GCMs 737
GCM, atmospheric; climate change, regional, review of approaches to simulation; review 739
atmosphere; oceans; computational dispersion properties of horizontal staggered grids 1053
atmospheric water vapor; climate; better understanding of water vapor role needed 1749
stratification, deep-water representations 1771
free surface Bryan-Cox-Semtner model 1777
Southern Ocean; open boundary condition in the U.K. FRAM model 1787
contributions; Cox: Michael; tribute 2375
and organism transfer, results 2378
Southern Ocean; FRAM model 2379
wind, satellite scatterometer, to force GCMs 2897
circulation: monsoon
Indian Ocean, W equatorial, above; pre-onset transformations 1285
understanding and prediction 1302
Australia, N of; atmospheric convection; the Equatorial Mesoscale Experiment, overview 1897
Pacific, W tropical; ocean-atmosphere interactions; generation of the Mindanao Dome 1914
onset; India; model description and validation 1919
onset; Arabian Sea; air-sea interactions; budget and sensitivity studies 1920
boundary-layer heights over the trough region during active and break phases 1921
India; monsoon rainfall; secular variations in relationships . 1932
Indian Ocean; forcing mechanisms 2082
climate; long-term regulators 2382
Indian summer; modelling 2520
circulation: shelf
Canada, E 1785
Europe, NW; tides; EUROSPILL databases 3242
circulation: thermohaline
ocean; nonuniqueness 1128
global; multiple equilibria 1781
climate, ocean; role of mixed boundary conditions in models .. 1792
4-D analysis 1813
catastrophic transitions; climate modelling 2400
Weddell Sea, formation of Ice Shelf Water; Filchner-Ronne Ice Shelf, beneath 2458
circulation tracers
Banda Sea, S Banda Basin; distribution, application of Munk's abyssal recipes 20
North Pacific; tritium, bomb-produced; two decades of mixing 647
Ross Sea; Antarctica; chlorofluorocarbons; ventilation, rapid 1136
Japan: Sea of; tritium; deep water renewal time 1791
circulation: wind-driven
simulations and theory 1784
circum-Pacific (More at Pacific ...)
Cirripedia
population structure; larval recruitment, and settlement; influence of larval supply 2286
Brazil; Coronuloidea, from the coast; Stomatolepas, redescribed 2296
cirrus clouds
climatology; remote sensing, NOAA/HIRS 2537
Clarion Fracture Zone
Clipperton Fracture Zone; manganese nodules; formation, growth 3143
clay<s> (More at SEDIMENTS ...)
clay diapirism
Caribbean Sea; Barbados, prism; margin sediments 1392
clay diapirs
Baltic Sea, area; Skagerrak; sediments, gas-charged; pockmarks 3133
clay minerals
Pacific, S central; sediments 278
Pacific, central; sediments; in Chinese, English abstract 301
North Sea; particles, ultrafine; STM and AFM investigations 825
Bengal Fan; sediments, history, chemical characteristics ... 1384
Bannock Basin; sediments, pelagic; sapropels; clay origin and differentiation 2072
India, W, off Saurashtra; sediments, shelf and slope 2596
India, E, Krishna to Ganges River mouth; shelf sediments .. 2597
Neogene, -Quaternary; Egypt; Nile Delta, Ras El-Barr well; shales, thermal maturity 3050
clay sediments
isotopic composition variation; Tertiary; Texas, Gulf coast, off 1403
clays
sediment geotechnical properties; earthquakes, -induced settlement 827
cliffs: sea
retreat; California, S, coastal area; sediment failures, mass movements 818
climate
data assimilation; Mediterranean Sea, as example; circulation, numerical models 16
variability, and 1982-83 El Niño; surface; irradiance, net solar; global monitoring 127
seasonal summary winter 1990; Southern Hemisphere 129
Pleistocene; Northern Hemisphere; glaciationimulation of the last cycle 130
model stability, variability; ocean-atmosphere interactions; circulation, general; results of 100-yr simulations 132
effects on; fossil fuels; biomass burning; heating or cooling? 134
circulation, GCM simulations, sensitivity; moisture transport, formulation 135
impacts on; clouds, radiative effects 149
indices; Atlantic, tropical; surface temperature; applications 630
feedback; snow; circulation modelling; feedback interpretations in 17 GCMs 737
atmospheric aerosols, importance; overview 740
records; Quaternary; paleoclimate; strategy for frequency spectra 833
Holocene; North America; salinity; reconstruction of past changes using diatom-based transfer function 836
Mediterranean Sea; sapropels, formation; review 843
competing effects in shaping; sea ice; snow, cover 1205
prediction; heat engine, ocean as; stiffness of chaotic systems . 1269
unit year of climate anomalies; monsoon year, proposed as concept; tropics; ocean-atmosphere interactions ... 1270
global weather; unlikelihood of low-dimensional attractors .. 1303
atmospheric water vapor; circulation modelling; better understanding of water vapor role needed 1749
ocean; thermohaline circulation; role of mixed boundary conditions in models 1792
past 10 myr; Miocene, Late, since; insolation, values; radiation, solar 1903
global temperature, record; do bidecadal oscillations exist in the record? 1905
solar cycle, length; relationship 1906
sensitivity, projections; global warming; review 1907
-cloud-DMS hypothesis, relation to; atmospheric particulates; cloud condensation nuclei, and Aitken nuclei, measurements 1927
Pliocene; paleoclimate; AGU meeting, papers 2086
13-kyr record; Holocene; Tibet, W; paleoclimate 2093
studies, impact on; satellite geodesy; global change 2346
least-cost stabilization; global warming 2369
monsoon circulation; long-term regulators 2382
sun, role; global warming; report 2384
regimes; Pleistocene; stochastic resonance model 2502
studies; clouds; radiation; remote sensing, operational satellite data 2505
sensitivity; water vapor, mixing ratio 2506
wind field, satellite, utilization; global change, studies 2527
monitoring; satellites, operational; remote sensing; proceedings 2853
and circulation, studies; satellite data, center, role 2858

Mission to Planet Earth, program description; U.S., NASA; global change ... 2863
U.S.; global change, program; Navy/NOAA Joint Ice Center, role; ice, regional and global analyses and forecasts ... 2867
measurement of state variables; Arctic area; Lancaster Sound; sea ice ... 2919
anomalies; South China Sea, N, during; El Niño, 1986-87; in In Chinese, English abstract ... 2946
weather; predictability ... 2966
and climate change; Quaternary; China, mainland; sediments; paleoenvironments; collection ... 3069

climate change
productivity, oceanic, changing; global warming, probable effects ... 431
greenhouse-induced; policy, advice; scientists, dilemma ... 603
circulation, general; ocean-atmosphere interactions; heat transport fluctuations vs greenhouse effect ... 612
regional, review of approaches to simulation; circulation modelling, GCM, atmospheric; review ... 739
Cenozoic, Late; paleoclimate; carbon dioxide, dynamics; ice, global mass; temperature; first-order global model ... 741
signals; greenhouse gases; circulation, changes, possible effects on signal; editorial ... 742
over past 10,500 yr; Caribbean area; reconstruction ... 837
circulation, oceanic ... 1262
long-term; climate modelling ... 1266
abrupt, 15-10 kyBP; North Atlantic; deglaciation; glacial meltwater, discharges; deep circulation ... 1432
atoll states, future of; sea level, rising ... 1737
global warming; comments on mechanism proposed limiting tropical Pacific warming ... 1751
implications for; Greenland Ice Sheet; ice cores; paleoclimate; report ... 1752
prediction; models, uncertainties, research priorities ... 1908
response to; North Atlantic; Bivalvia; Brachiopoda, migration ... 2105
heat transport, oceanic; chaos theory, applications; report ... 2380
atmospheric carbon dioxide ... 2951
China, historical records ... 2952

climate: continental
Pleistocene, Late; North Pacific, W; paleoceanography, oceanic variability; sediments, recorded in ... 838

climate data
remote sensing, satellite; derivation of long-term sets ... 2501

climate: global
system sensitivity; circulation modelling; impact of initial conditions ... 136
effects on; atmospheric aerosols; symposium; 24 papers ... 774

climate: interglacial
conditions; Antarctica; McMurdo Sound; basin sedimentation; resultant facies distribution ... 2048

climate modelling
energy balance model with hydrological cycle; sensitivity to internal parameters ... 1264
stability and sensitivity to external forcing ... 1265
climate change, long-term ... 1266
sea ice; albedo, parameterization ... 1267
thermohaline circulation, catastrophic transitions ... 2400
parameterizing subgrid-scale open water ... 2503

climate monitoring
surface temperature, multichannel, product quality ... 2491

climate warming
atmospheric carbon dioxide; plants, aerial fertilization effect; greenhouse effect, implications for ... 133

climate: wave
changes; North Atlantic; North Sea; increases in mean wave height since 1950 ... 2912

climatic databases
ATMOES; atmospheric temperature; satellites, operational environmental ... 2861

climatology (See also paleoclimatology ...)
use of extreme value statistics; extreme waves, and tides, etc. ... 1252

climatology: historical
a source; al-Biruni's tenth century chronology ... 1059

Clipperton Fracture Zone
Clarion Fracture Zone; manganese nodules; formation, growth ... 3143

cloud bands: convective
North Sea, over, airplane investigations ... 756

cloud condensation nuclei
and Aitken nuclei, measurements; atmospheric particulates; climate, -cloud-DMS hypothesis, relation to ... 1927
atmospheric aerosols, methanesulfonate; seasonal relationship ... 1943
stratus clouds, near ... 2532

cloudiness
surface temperature; radiation, solar; recent interannual variations ... 1254
model-generated; remote sensing, ISCCP-B3 data ... 2533

clouds
radiative effects; climate, impacts on ... 149
water; ice; broad band radiative transfer properties ... 151
cirrus; surface temperature; remote sensing, measurements, influences on ... 153
models; aerosols, marine; particles, scavenging ... 161
condensation nuclei; North Pacific, over; dimethylsulfide; correlations ... 162
atmospheric aerosols; radiance; interactions, climate modelling implications ... 772
clusters; atmospheric waves ... 1288
particulates, production ... 1299
air-sea interactions; heat flux, turbulent and net; radiation flux; modelled relationships ... 1901
stratocumulus; wind; boundary-layer transition across the cloud edge in a coastal zone ... 1928
global; satellite imagery ... 1929
boundary-layer, breakup; surface temperature, inhomogeneous field ... 1930
motions, from; wind, operational production; remote sensing ... 2494
radiation, Earth budget; hydrologic cycle; modelling ... 2504
climate, studies; radiation; remote sensing, operational satellite data ... 2505
structure; monsoon depressions; wind field ... 2530
stratiform, formation; marine boundary layer ... 2534
motion; wind, derived from; remote sensing, Meteosat ... 2535
atmospheric aerosols; remote sensing, NOAA/NESDIS ... 2536

clouds: cirrus
climatology; remote sensing, NOAA/HIRS ... 2537

clouds: polar stratospheric
Antarctica, over; atmospheric particulates; aerosol types, temperature, ozone layer implications ... 1300

clouds: stratus
near; cloud condensation nuclei ... 2532
marine boundary layer; diurnal variation ... 150

Clupea
harengus (herring); North Sea; fish larvae, growth; regional and seasonal differences from otolith analysis ... 962

Cnidaria
Africa, SW coast; Hydromedusae, 4 n.spp. ... 2266
Ctenophora; plankton, competitors in; predation; review ... 2791
Ctenophora; selected bibliography ... 2796
Coelenterata, biology; Ctenophora; recent research; conference papers ... 2797

cnoidal waves (More at WAVES ...)

coal
terrestrial organic matter; petroleum, potential as source rocks for; symposium papers ... 2189

coal ash lagoons
Hong Kong; environmental monitoring; an 'oyster watch' monitor ... 1028

coast<s> (See also bars, bays, beaches, channels, cusps, dunes, estuaries, fjords, flats, harbors, ISLANDS, lagoons, marshes, mudbanks, REEFS, shoreline, spits, straits, surf zone, swash zone, tidal zone, wetlands; more at LITHOSPHERE, OCEAN ...)

coast effect
Australia, SE; geomagnetic field; 2-D interpretation ... 1462

coastal circulation (More at CIRCULATION ...)

coastal currents
evolution; escarpments, wedge-shaped, over ... 124
and filaments; California, N coast; the Coastal Zone Transition Program; collection; 23 papers ... 1112
shortwave instabilities ... 1231
India, W, off; monsoons, NE, during ... 2414

coastal development
South Carolina, Folly Beach; hurricanes, Hugo 1989; erosion policy, national, needed; CZM, failings ... 2875

coastal embayments
Spain, Galicia, the Corrubedo beach-lagoon complex; shoreline dynamics; sediments ... 262
low-energy; sedimentation ... 1369
California, central coast; Brachyura, larvae; seasonal occurrence, abundance ... 2810

coastal erosion (More at EROSION ...)
problems; Europe, 11 countries; littoral zone, database 258
coastal flow
modification; Spain, NE coast; submarine canyons 14
near-surface; California; statistical properties 653
coastal fogs
bogs, blanket; evaporation 2538
coastal fronts
in; organochlorines, persistent 810
coastal hydrodynamics
modelling 13
coastal lagoons
India, Laccadive Islands; zooplankton, diel patterns and emergence 1600
coastal sedimentation (More at SEDIMENTATION ...)
coastal sediments
Irish Sea; neptunium 194
Japan; Tokyo Bay; Funka Bay; uranium 197
Baltic Sea; Kiel Bight; denitrification; in German, English abstract 221
diagenesis; Pleistocene, highstands, as cause; South Africa, Durban; shoreline dynamics 250
Italy, Emilia-Romagna coast; Po River, Delta; cesium, -137, distribution 270
metalseochemistry during sediment formation 275
Florida, Sarasota Bay; shoreline dynamics; carbonates, enrichment, hurricane-induced 1368
California, N; thermoluminescence dating 1385
Massachusetts; Buzzards Bay; carbon cycling, estimating remineralization 1984
India, off Kerala; quartz, detrital grains; surface microtextural study 2595
Adriatic Sea, E, long-term trends; organochlorines; DDT; PCBs 3041
Germany, Greifswalder Bodden; chemical studies; in German, English abstract 3054
coastal upwelling
and fronts; China, off Zhejiang 40
Quaternary, Late, during summer; Arabian Sea; atmospheric circulation, paleo- 322
Peru; Quaternary, Late; productivity, changes revealed by diatoms 331
California, N, off; phytoplankton, transport; water masses, subduction 1114
coastal waves (More at WAVES ...)
coastal zone
transition; Iberian Peninsula; North Atlantic, E; Lagrangian circulation; currentsbservations 639
current transport; use of simulated drifter tracks to investigate patterns and residence times 640
transition area, dynamics; California, N, off; current jets; nonlinear finite amplitude behavior 651
transition; California, N, off; currents; water masses; summer 1988 studies 656
transition area, dynamics; California, N, off; flow, assimilation modelling studies; currents 665
transition; California, N, off; current filaments, cold; structure, dynamics 667
transition; California, N, off; boundary currents; currents; boundary; filament formation and evolution, dynamical simulations 669
transition, structure; California, N, off; currents; frontal jets 671
transition; California Current, system; current filaments, cold, nature of 674
transition area; California, N, off; current filaments, subduction 720
area of complex heating; breezes, sea and river, interactions .. 755
Netherlands; suspended matter, distribution 790
India, S; insecticides, HCH, fate 809
California; San Nicolas Island, high-energy coast; fossil record; thanatocoenoses, modern 850
river inlet as natural laboratory for science and management; Rhode Island, Narragansett Beach; Narrow River, post-glacial history, plankton, pollution, flows, restoration; 7 papers 1113
the importance of inherent properties; ecometric analysis; environmental impact, quantifying 1729
inshore; Seychelles, Curieuse Island; biogeochemical investigations 1953
events, history; Pliocene; Pleistocene; Australia, W margin; shoreline dynamics 2022
waters; nitrogen, inputs; atmospheric deposition 2511
pelagic food webs, structure; benthos, interactions with ... 2668
brackish waters; phytoplankton; bacteria; relationship, incidence of vibrios 2725
fog, water collection 2965
coastal zone management (Use CZM)
coasts
morphogenetic zones and transitions; Europe; shoreline dynamics; coastal processes 248
beachrock, formation; shoreline dynamics; implications for coastal evolutionary models 249
historical changes; U.S.; shoreline dynamics; erosion, mapping; CZM 251
recession and accretion; shoreline dynamics; temporal analysis 252
Cobb Offset
Juan de Fuca Ridge; rifting, propagation history, constraints on; tectonics 3092
Coboldus
laetifucatus n.sp.; Barbados; Amphipoda, iphimediid 3189
Coccolithophoridae
Pacific, W; Indian Ocean, N; epicontinental seas; Recent monsoonal and fertility controls on coccolith assemblages . 540
Maine; Gulf of; plankton blooms; biological and optical properties of the bloom 1692
sedimentation and transport; North Sea 1693
Emiliania, huxleyi, genotypic variation 2835
Codium
tomentosum; Posidonia, oceanica; metals, Hg, Cd, Pb 1030
Coelenterata
associates of; Crustacea, chirostylid, galatheid; Echinodermata, associates of; submersible collections 519
distribution; South Atlantic, W; Siphonophora; Rhodalia, miranda; ecological, oceanographic implications 2792
biology; Cnidaria; Ctenophora; recent research; conference papers 2797
coevolution
myths; marine plants; herbivores, marine; mutualism, precarious 1581
coexistence
predator-mediated; Calanoida, in heterogeneous environment; Acartia, tonsa; Eurytemora, affinis; competition 2280
cold air outbreaks
during; U.S., SE, off; marine boundary layer, evolution ... 1282
cold core rings (More at rings ...)
cold fusion
no evidence for; Hawaii; Kilauea, active crater; tritium, concentrations 2634
coliforms (More at BACTERIA ...)
collision tectonics
Asia, SE; Indonesia; regional evolution since 43 Ma 367
continental crust; subduction, and eduction; model 398
material transfer in an arc-ridge collision zone 1484
New Hebrides Arc, (Vanuatu); South Pacific, W; accretionary wedges; guyots, Bougainville Guyot; structure of the arc-guyot collision zone 2123
Papua New Guinea; Solomon Sea; collision propagation . 2130
crust, flexural extension in foredeeps 2151
Taiwan, SE, off; ridges; troughs 3087
collisions: continental
zones; eclogites, formations; crust, roots, dynamics 2639
colloidal iron
photolysis; effects on chemical lability 1316
colloidal particulates
small; seawater; occurrence 1342
colloids
and HMW dissolved material, contributions; estuaries, and shallow seas; nutrients, concentrations; alkalinity 1974
surface chemistry; trace elements, scavenging 3006
particulates; metals, transition, analysis 3013
seawater; metals, associated; particulates; filtration, technique 3018
colloids: iron
oxyhydroxides; photochemistry; seawater, in 2563
colloids: organic matter
seawater; isolation methods 2990
Colombia
Sinu River/Darien Gulf shelf; shelf sediments, mud; depositional facies, origin, controlling factors 819
Caribbean coast; Isopoda, anthuridean; Skuphonura, kensleyi n.sp. 2274

colonial invertebrates
Didemnum, moseleyi; reproduction, sexual vs asexual and density of neighbors ... 997
colonies: invertebrate
size, shape effects; Ascidiacea; Didemnum, moseleyi; rates of fission, fusion, growth, mortality ... 996
colonization (More at ECOLOGY ...)
colonization: algal
Gastropoda; rocky shores; grazing, impacts ... 972
color (More at LIGHT ...)
atmosphere; light; optical phenomena; review collection; 23 papers ... 775
comets
small, striking; atmosphere, outer; small comet hypothesis vs instrument artifact hypothesis ... 1757
Commander Basin
Oligocene; Neogene; Bering Sea, W, geology; basin sediments; stratigraphy ... 1427
commercial fisheries
Cetacea; gillnets, acoustic reflectivity enhanced to reduce entanglement; target strength measurements, implications for incidental dolphin take ... 1096
Cetacea; gillnets, modifications to reduce entanglement; merits of acoustic modifications discussed ... 1097
commercial fishing
South Atlantic, W, activity in; krill ... 2873
communication (See also choruses, CHEMOTAXIS ...)
communications (See also public media, radio, signal lamps, TELEMETRY, telephone, television ...)
computers; network technology ... 2344
communities (More at ECOLOGY ...)
effect of patch size; Australia, S, Gulf of St. Vincent; sessile invertebrates ... 3165
communities: abyssal
fossil record, trace fossils; ecologic interpretations ... 852
sediment; North Atlantic, NE; Rhizopoda; Xenophyophoria, 7 taxa ... 1015
communities: aquatic
microbiota; amplification, cloning and sequencing of a nifH segment ... 1656
communities: bacterial
development; Baltic Sea; pelagic zone ... 1657
changing; trace metals, scavenging, effects on; particulates, deep-sea plume ... 2256
psychrotrophic; Greenland Sea, W; Fram Strait; biomass, nutritional requirements ... 2774
communities: benthic
macro-, meiofauna; Baltic Sea; Pomatoschistus, minutus (Pisces); Saduria, entomon (Crustacea); predation, by fish, crustaceans ... 966
Georgia Bight, Gray's Reef; metabolism; nutrients, cycling 975
flora-fauna interactions; conference papers ... 2717
Aegean Sea, Cyclades Plateau; analysis ... 2718
impacts on; Baltic Sea; eutrophication; pollution ... 3148
zoo-; Baltic Sea; eutrophication, consequences ... 3203
Baltic Sea; algae; eutrophication, influences ... 3209
Adriatic Sea; Gdansk Deep; macrozoobenthos, long-term changes ... 3223
communities: coral
larval recruitment; geographically specific recruitment and postsettlement mortality ... 983
Scleractinia; Echinodermata; Acanthaster, planci, outbreaks; are they novel events?; predation, massive ... 2241
communities: epibenthic
Mediterranean Sea, W; utilizing Spot satellite imagery; in French, English abstract ... 3169
communities: epontic
structure; Antarctica, waters around; sea ice; productivity 2214
communities: estuarine
Bivalvia; Mytilus, edulis, variations in age-class densities; population dynamics ... 978
communities: fouling
pollution, transfer from unpolluted to polluted sites; impact on community structure ... 558
dredging, effects; effects on larval settlement, community development ... 988
communities: intertidal
structure; nutrients; guano, seabird, variable consequences of 2253
communities: kelp
macrophytes, canopies, beneath; benthic suspension feeders; effects of understory kelps on faunal growth rates and survival ... 1635
long-term stability; Strongylocentrotus, franciscanus; sea urchins; El Niño, ENSO events; relationships ... 2714
North Atlantic; Laminaria, longicruris, refugial role; sea urchins, reduction in grazing ... 2829
communities: macrobenthic
deep-sea; Japan, NW; Sanriku, off; seasonal variations ... 1640
recovery; sewage sludge; disposal sites, cessation of dumping ... 2328
effects on; petroleum production, activities; production water discharges ... 2329
Aqaba: Gulf of; Jordan, beaches; seasonal variation in community structure ... 3167
communities: macrofaunal
Adriatic Sea, N; eutrophication, long-term effects ... 2840
communities: meiobenthic
response; sewage pollution, gradient ... 2332
California, shelf; Santa Maria Basin ... 2711
communities: microalgal
benthic; nutrients, effects of enrichment; community composition in shallow water ... 1026
communities: microbial
limited vs unlimited membership; paradigm testing ... 1660
deep-sea; nutrients, availability ... 2746
Baltic Sea; distribution, activity ... 2763
organic chemicals; mineralization, in seawater ... 2778
communities: microplankton
British Columbia; Georgia: Strait of; patchiness; mosaicism ... 1592
communities: nekton
dynamics; Mississippi, Old Fort Bayou; littoral zone; river-estuarine gradient, along ... 2238
communities: pelagic
test of the distributed state, kinetic modes of heuristic models .. 1584
communities: periphyton
arsenic, arsenate stress; pattern of cotolerance ... 3199
communities: phytoplankton
Greece, Thermaikos Gulf; composition and biomass ... 449
dynamics; North Pacific, Central Gyre; ocean-atmosphere interactions, impacts ... 2210
Arctic Ocean; Fram Strait; distribution in relation to hydrography ... 2682
communities: picoplankton
analysis by gene cloning and sequencing ... 500
communities: plankton
respiration; chlorophyll, concentration; relationship ... 1596
structure; Black Sea, epipelagic zone; Ctenophora, new species, invasion by ... 2229
communities: plant
coastal; freshwater-seawater boundary, near; water relations ... 2830
communities: reef
guilds, reef-building, checklist for membership; new approach to community studies ... 970
nutrients, particulate organic, biologically imported; detritus; food webs, importance in ... 1340
communities: seagrass
Texas; Laguna Madre, hypersaline lagoon; bacterioplankton, abundance and production dynamics ... 927
Harpacticoida, sediment-dwelling, impact on; epifauna, large, disturbance by; predator-prey dynamics ... 985
communities: sediment
Echinodermata, deposit feeders; Holothuria, tubulosa; microbiota; relationship ... 2702
Echinodermata, deposit feeders; Holothuria, tubulosa; fecal pellets, decomposition ... 2703
India, W, Konkan; population dynamics, and community structure; macroinvertebrates ... 2716
Polychaeta, sedentary; radionuclides, Rn-222, transport; advection-diffusion model ... 3049
communities: seep
Mexico: Gulf of, Florida Escarpment base; seafloor; crust, porous, deep in; bacteria, as producers of methane; report 1119
communities: shelf
North America; Arctic Ocean, shelf; benthic ecology; invertebrates, benthic ... 2242
Canada; benthic ecology; symposium review ... 2250
Canada, shelves; seabed; sediments; symposium proceedings ... 2350
supra-benthic; Fundy: Bay of; Saint Lawrence Estuary; Amphipoda; subcommunity structure compared ... 2803

Gulf Stream, frontal eddy influence; U.S., shelf; productivity ... 3256
communities: subtidal
rocky; benthic fauna; predator-prey interactions ... 472
rocky coast; France, W Brittany; factorial analysis in ecology . 969
communities: vent
sulfides, biological tolerance of; sediments; macrofauna .. 2207
communities: zooplankton
France; Biscay; Bay of; annual cycle of abundance, composition, size spectra ... 456
California Current; pattern associated with a cold filament .. 940
community ecology
history of science; the past century, perspective ... 1103
community production
North Pacific, Subtropical Gyre; productivity, gross; oxygen, respiration; in-vitro and in-situ rates ... 1620
community structure
Antarctica, waters around; micronekton; macrozooplankton; sea ice, beneath ... 961
temporal changes in; Japan, Nabeta Bay; sessile biota; succession ... 974
meiobenthic, effects on; Amphipoda; Monoporeia, affinis, as bioturbator; bioturbation, biological disturbance 980
spatial, post-mortem erosion of; Newfoundland; Grand Bank, outer; benthic macrofauna ... 2251
community succession
phytoplankton; convergence in microcosms using different inoculum species composition ... 951
South Africa, E Cape shore; intertidal macroalgae ... 2715
Fucus, canopy; ice scours, massive, following; Mytilus 3168
compasses: current meter
nonlinear response ... 1797
competition (More at ECOLOGY ...)
Calanoida, in heterogeneous environment; Acartia, tonsa; Eurytemora, affinis; coexistence, predator-mediated .. 2280
compound eyes
structure; Stomatopoda, mantis shrimp; light, polarized, detection ... 2815
structure; Stomatopoda, mantis shrimp; pigments, color; vision, polychromatic ... 2816
compounds
individual; isotopic analysis ... 2971
computer graphics
geophysical data, display, interpretation; image analysis; signal processing ... 2006
computer science
frontiers ... 2349
computer software
structural geology; microcomputer techniques and applications ... 1999
computer technology
computational; statistical analysis; data, analysis, manipulation ... 575
geoscience data; a new approach ... 1360
neural networks ... 1719
computers
communications; network technology ... 2344
conductivity (More at SALINITY...)
conductivity: electrical
seafloor; lithosphere, thermal structure investigations; ML soundings; in French, English abstract ... 346
Ryukyu Arc, and Trench, beneath; seafloor; subduction, relation to; crust ... 1552
conductivity-temperature-depth (Use CTD)
Congo River (See also Zaire River)
contaminants
metal; invertebrates; cytological detoxification; microanalytical applications reviewed ... 561
accumulation, transfer, transformation chemistry; natural waters; pollution; multicompartment ecotoxicological models; in French, English abstract ... 563
non-radioactive; U.K., monitoring programs, impact assessment, disposal licensing, etc.; pollution monitoring; ocean waste disposal; MAFF report 1988-89 ... 1088
chemical; California, Palos Verdes shelf and Santa Monica Bay; sediments; toxicities, profiles; organic matter .. 1996
pollution monitoring; biomonitoring, long-term; Southern and Northern Hemisphere perspectives ... 3247
continent<s> (More at LITHOSPHERE ...)
continental climate
Pleistocene, Late; North Pacific, W; paleoceanography, oceanic variability; sediments, recorded in ... 838
continental collisions
zones; eclogites, formations; crust, roots, dynamics ... 2639
continental crust
collision tectonics; subduction, and eduction; model ... 398
lithosphere, continental, thickness; mantle convection, second-scale, influence ... 1549
speculation on its evolution ... 3121
continental drift (More at PLATE TECTONICS ...)
Dick; Thomas, 1838 book, first mention of the possibility ... 2887
continental environments
Quaternary; Africa, NW and E margins; margin sediments, recorded by ... 311
Cretaceous; Tertiary; Africa, off; basin sediments ... 319
continental lithosphere
extension; Ethiopia, Afar; tectonics, block rotation; comparison to oceanic microplate systems ... 348
mantle plumes; hotspots, and pre-existing thinspots ... 2655
continental margin (More at LITHOSPHERE ...)
continental rifts
Baikal Rift; crust, deep structure investigations; seismic explorations ... 894
East African Rift, System; seismicity, recent, implications . 2163
Kenya; East African Rift, System; lithosphere, structure, large-scale variation ... 2647
Africa, East; East African Rift, System; crust, beneath; asthenosphere, intrusions ... 2888
East African Rift, System, Afro-Arabian Rift; Dead Sea Rift; Aden: Gulf of; Red Sea Rift; overview ... 3086
Dead Sea Rift; spreading centers ... 3096
continental shelf (More at SHELF ...)
Continental Shelf Research
publishing; scientific journals; review ... 2373
continental shelves
Canada; physical oceanography; symposium overview ... 1764
continent-ocean boundaries
magnetic field, anomalies; satellites, from ... 336
definition; India, and surrounding regions; magnetic field, Magsat studies ... 341
Australia, off; Exmouth Plateau; transform margins; tectonics, development ... 863
Svalbard, margin; Barents Sea; crust, deep seismic transects across ... 1521
continent-ocean transitions
Alaska, Sitka Sound, from; British Columbia, Atlin Lake, to; crust; northern Cordilleran transect ... 2152
continents
oceans; magnetic field, mean contrasts ... 337
magnetic field, anomalies; oceans; crust; meeting collection; 17 papers ... 343
growth; accretion tectonics; margin, dynamics, terranes; ACCRETE workshop steering committee reports ... 360
breakup, role in; mantle plumes, starting; plate tectonics .. 1528
accretionary tectonics; symposium papers ... 3095
breakup; Japan; East African Rift; rifting, active mechanism; backarc spreading ... 3097
contourites (More at SEDIMENTS...)
Controlled Ecosystem Pollution Experiment (Use CEPEX)
convection (See also radiative-convection; more at FLUID DYNAMICS ...)
horizontal on β-plane; circulation, buoyancy-driven ... 18
vacillatory, in rotating sphere at infinite Prandtl number; fluid dynamics ... 730
sedimentation-driven; density, stable gradient, erosion of; turbidity currents ... 1230
borehole fluid, evidence for?; seafloor, DSDP Hole 504B; heat flow, reduction with depth ... 1473
thermal, effect of; sound, vertical speed profiles; acoustics .. 1853
convection: atmospheric
Pacific, W tropical, over; surface temperature; water vapor; relationships ... 139
tropical cyclones; variations caused by upper-tropospheric troughs ... 765
Australia, N of; monsoon circulation; the Equatorial Mesoscale Experiment, overview ... 1897
tropospheric waves, Rossby-gravity; structure, variation of tropical convection fluctuations ... 2522
precipitation, and kinematic structure; convective line structure ... 2523
precipitation, and kinematic structure; momentum transport, and generation ... 2524
convection: cumulus
tropical; North Pacific; atmospheric oscillations, intraseasonal; ocean-atmosphere interactions ... 147

convection: mantle
mechanisms ... 399
core, convection, dynamics; magnetic field, Earth's; lecture . 406
influence of phase transitions and chemical heterogeneity ... 1515
second-scale, influence; continental crust; lithosphere, continental, thickness ... 1549
petrology ... 1558
lithospheric dynamics; geodynamic heating system description ... 2185
convective cloud bands
North Sea, over, airplane investigations ... 756
convective mixing
atmospheric; monsoon boundary layer ... 750
convergence (More at FRONTS ...)
feedback; ocean-atmosphere interactions; oscillations .. 1275
convergent fronts
U.K.; pollution, implications for; estuaries ... 1725
convergent margins
volcanic arcs, active; lithospheric stress, fields of the overriding plate ... 2131
cooling: surface
abrupt, evidence for; Oligocene, Earliest; Southern Ocean . 844
Cooperative Investigation of the Northern Part of the Eastern Central Atlantic (Use CINECA)
Coordinated Ocean Research and Exploration Section (Use CORES)
Copepoda
seagrasses; faunal recruitment; field test ... 479
planktonic; Weddell Sea; summer distribution, abundance .. 514
Calanus, finmarchicus, phenology; hypotheses about control mechanisms ... 517
California Current; Metridia, pacifica; population dynamics, genetic response; eddies, coastal, response to ... 1003
as prey; Euphausia, lucens, as predator; carnivory, selective; zooplankton ... 1005
harpacticoid; Potamocaris, including 2 n.spp. ... 1010
California, off Point Arena; Eucalanus, californicus, jet role in aspects of secondary production; current jets ... 1011
benthic; lipids, storage products; Nile red as a probe ... 1574
Japan; Sea of, Toyama Bay; zooplankton, vertical distribution ... 1594
Antarctica, coastal waters; Calanoides, acutus, dynamics .. 1679
co-occurring, do they compete?; zooplankton; feeding ecology ... 2231
cyanobacteria, foraging on; chemical defenses, response to; resource abundance effects ... 2276
remote detection by; phytoplankton, size, odors, motility ... 2277
herbivorous, diurnal rhythms, rations and consumption; phytoplankton, consumption of ... 2278
life cycle stages; zooplankton; phosphorus metabolism .. 2279
Eurytemora, affinis; estuaries, retention in ... 2281
Calanus, euxinus, new name for C. ponticus ... 2282
planktonic; Florida; Apalachicola Estuary; seasonal patterns in adult, copepodite, nauplius, and egg abundance in the seabed ... 2284
proceedings of the fourth international conference ... 2293
nauplii, associated; Mississippi River; river plumes, nutrient-rich ... 2675
consumption by; Chesapeake Bay, waters; Ciliata, microphagous, growth rates ... 2677
Benguela Upwelling, S; Calanoides, carinatus; zooplankton, meso-, abundance, distribution, production ... 2697
Benguela Upwelling, S; Calanoides, carinatus, fecundity; zooplankton ... 2798
Great Barrier Reef; Scleractinia, associated with; Lichomolgidae, key to the genera ... 2811
Artemia, franciscana; copper, uptake; effects of hydrogen ions and inorganic complexing ... 2839
South Africa; Calanus, n.sp. ... 3184
copper
voltammetric determination; seawater; presence of ethylenediamine ... 183
complexing capacity; seawater; phytoplankton bioassay method; in Chinese, English abstract ... 190
complexing capacity; seawater; polarographic determination; in Chinese, English abstract ... 191
vertical profiles; Papua New Guinea, Fly Delta and Gulf of Papua; sediments ... 227
Phaeodactylum, tricornutum; toxicities; in Chinese, English abstract ... 567
extractability; sediments; organic matter, degradation, as a function of ... 793
sorption by Mn-oxyhydroxides; seawater, major ions, role; ores, polymetallic, formation ... 913
complexation behavior; organic metal complexes ... 2561
labile; zinc, labile; monitoring in estuarine water using cathodic stripping chronopotentiometry ... 2562
uptake; Copepoda; Artemia, franciscana; effects of hydrogen ions and inorganic complexing ... 2839
copper pollution
Maryland, Patuxent River; Bivalvia, oysters; bioindicators 2337
coral atolls
Arabian Sea; Lakshadweep; seagrass beds; habitats, complexity; macroinvertebrates, abundance ... 2705
coral bleaching
greenhouse warming; role in reef stress unproven; report ... 616
Scleractinia; Montastrea, annularis; effects on banding, isotopic composition ... 995
Java Sea; Scleractinia; Fungiidae; stress, tolerance, and interference by life history strategy ... 1639
coral communities
larval recruitment; geographically specific recruitment and postsettlement mortality ... 983
Scleractinia; Echinodermata; Acanthaster, planci, outbreaks; are they novel events?; predation, massive ... 2241
coral growth
hermatypic, forms; Scleractinia; application of tree architecture models ... 2783
coral reefs (More at REEFS ...)
microzooplankton, standing stock ... 435
rocky; Australia; New South Wales; humans, as predators, impact ... 598
Great Barrier Reef; numerical models, self-seeding effects shown in ... 968
Mexico, Cozumel; Porifera; fish; hurricanes, Gilbert, effects ... 971
Australia; Great Barrier Reef; pollution; opinions; 4 papers ... 1095
histories; stable isotope analysis; biota, giant clams, corals, calcareous algae as recorders ... 1372
role; global productivity, ocean ... 1634
ecosystems; Vietnam, off; productivity; metabolism 1645
paleoclimate, and climate change; as recorders of environmental changes ... 1745
Barbados; demersal zooplankton; plankter patchiness and composition ... 2217
Bahamas, central; Scleractinia; Milleporina; community similarity and area coverage ... 2710
Red Sea; quantitative survey of damaged corals ... 2869
calcification; photosynthesis; alkalinity, anomaly technique ... 3166
Red Sea; ship groundings ... 3207
coralline algae
bacteria, associates; hypothesis for bacterial induction of invertebrate larvae ... 1654
rhodoliths, deep-water, distribution, productivity and growth history; carbonate nodules ... 1689
coralliths
growth; alluvial fans, submarine ... 243
corals
ESR ages; Pleistocene, Mid-; Ryukyu Arc; North Pacific, NW ... 315
reef-building; Millepora, spp., elimination of; El Niño, 1982-83 ... 432
mushroom; Indo-Pacific; Scleractinia; Fungiidae; taxonomy, phylogeny, biogeography ... 503
Gorgonacea; population dynamics, growth ... 504
older than 150 kyr; uranium, -234, anomalies ... 832
Pocillopora johnstonianus; predator-prey dynamics; fish, coral-feeding, damselfish; trophic energetics ... 919
comparative demography; Great Barrier Reef; Scleractinia, Goniastrea spp., Platygyra; age- and size-dependent classifications ... 993
reef-building; Pacific, E; Pocilloporidae; reproduction .. 994
larval; Pocillopora, damicornis, planulae; pesticides, carbaryl, naphthol, chlorpyrifos, effects of ... 1027
reef-, subtidal; Caribbean area; Panama, coast; oil spills, major; short-term ecological consequences ... 1035
larval; Pocillopora, damicornis, planulae; petroleum, products, effects ... 1045
Galapagos Islands; manganese, paleochemistry ... 1377
Caribbean Sea; Scleractinia; Montastrea, annularis; carbon, and oxygen isotope time series ... 1379

rubble, from; Red Sea; Aqaba: Gulf of; Amphipoda; Gammaridea, 7 families 1682
massive, 2 spp.; Acanthaster, planci, by; predation, effects of in; Scleractinia; primary production; respiration, dark; flow effects 2709 2790
Pocillopora, damicornis; zooxanthellae, pattern and rate of release; N-enrichment vs normal conditions 2793
massive, necrotic patches; Bengal: Bay of; Andaman Islands; Scolecobasidium, sp.; fungi, invasion by 2850
age; interglacials, age of last one; dating, U/Th 3071
distribution, prey capture; flow, effects of water movement ... 3171
core (More at EARTH ...)
convection, dynamics; mantle convection; magnetic field, Earth's; lecture 406
core-mantle interactions
mantle; symposium papers 1520
corers
pneumatic, diver-operated; sediments 238
box, GOMEX; benthic samplers, deep-sea 2708
cores (More at SEDIMENTS ...)
cores: ice
trapped in; Greenland Ice Sheet, as record, 1530-1940; atmospheric carbon dioxide 1297
Greenland Ice Sheet; paleoclimate; climate change, implications for; report 1752
Antarctica; snow, evidence for recent increases in accumulation 1849
Antarctica; Vostok; atmospheric carbon dioxide; paleoclimate 2508
cores: sediment
Quaternary, Late; Indonesia, E; palynology 1441
analysis by energy-dispersion X-ray fluorescence 2060
coring (More at SAMPLING ...)
Corinth Basin
Greece; Neogene, to Quaternary; Mediterranean area; rifting; sedimentation; basins, uplift 2606
Coronuloidea
from the coast; Brazil; Cirripedia; Stomatolepas, redescribed 2296
corrosion: bacterial
seawater; iron 3044
Corsica
off, and adjacent canyon; Mediterranean Sea; meiobenthos 2713
cosmic particles
radiation, Cherenkov; deep-water module for recording 1900
cosmic particulates
planetary debris; does it impact Earth? 2891
cosmic spherules
geologic record 2196
cosmogenic radionuclides
beryllium, -10, global cycle 779
cosmogenic tracers
Southern California Bight; mixing, vertical; radionuclides, P-32, Be-7 2480
Costa Rica
accretionary prism; seismic surveys; field program and migration examples 3128
Costa Rica Rift
DSDP Hole 504B; crust, alteration processes; magnetization, implications for 413
lithospheric heat flow; seismicity, lateral heterogeneities in seismic velocity; crust; DSDP site 504 2164
Cox: Michael
circulation modelling, contributions; tribute 2375
crabs
burrowing, influence; keystone species; mangrove forests, dynamics; productivity; nutrients, soil 2254
Crangon
crangon; Natantia; meiofauna, soft-bottom, impacts on; experiment 2247
septemspinosa, by; Decapoda; Callinectes, sapidus postlarvae, predation on; Palaemonetes, pugio, by 2288
Crary Fan
Weddell Sea, margin; fan sediments 246
Crassostrea
gigas, condition cycles; New Zealand, Manukau Harbour; Bivalvia; pollution, -related differences 2331
virginica; Bivalvia; zinc, measurement variability; baseline .. 2843
craters: impact
crust, ocean; magnetic exploration, model results 857
Cretaceous-Tertiary boundary; Mexico; Yucatan Peninsula; Chicxulub Crater 1428
terrestrial; geological record 2195
creeks: marsh
Decapoda; Zostera, marina, eelgrass beds; Ulva, lactuca, sea lettuce beds; fish, epibenthic; habitats comparison 2252
Cretaceous
Tertiary; Africa, off; basin sediments; continental environments 319
Cenozoic; Bering Sea, W, geology; basin sediments; history 1420
Mid-; mantle plumes, superplumes; carbon dioxide; global warming 1421
Early; Jurassic, Late; epeiric seas, and oceans; fossil record; nannoconids as paramount environmental recorders; in French, English abstract 1445
Madagascar; basalts, sources; volcanism; tracking oceanic and continental sources 1503
Early to Mid-; North Sea, central; lithostratigraphy; sediments 2084
terminal; Tethys, and warm transitional waters; Foraminifera, planktonic; biogeography, patterns; fossil record . 2617
Maastrichtian; paleoclimate; phytogeography; reconstructions 3072
Late; Foraminifera, planktic; Heterohelicidae; biostratigraphy 3080
Cretaceous-Tertiary boundary
extraterrestrial impacts, 'winter'; paleobotanical evidence .. 323
South Pacific, DSDP site 596; sediments 324
Alberta, (Canada); diamonds, nm-size; boundary sediments 835
Mexico; Yucatan Peninsula; Chicxulub Crater; impact craters 1428
seawater; strontium, isotopes 1434
impact spheroids, authigenesis; constraints for high resolution stratigraphy 1435
across; North Atlantic, Coastal Plain; extinction, selective, and survival; fossil record 1448
sections, how complete?; sediments; chronostratigraphy .. 2098
impact spherules; geochemical constraints on source region of glasses 2101
Haiti; tektites; impact hypothesis, bearing on 2609
Crete: Sea of
Mediterranean Sea; lithosphere, S-wave attenuation in; crust, OBS observations 2648
Crozet Islands
hotspot; Indian Ocean, Rajmahal Traps origin; hotspots, traces; aseismic ridges, 85°E, origin; reconstruction 2630
crude oil (More at OIL ...)
evaporitic; microbial degradation 550
characterization for environmental purposes 800
crust (See also LITHOSPHERE; more at EARTH ...)
structure; Taiwan, off, Tainan Basin; tectonics; basin sediments, stratigraphy 241
Barents Sea, NW; Olga Basin, shallow bedrock geology ... 277
magnetic field, anomalies; oceans; continents; meeting collection; 17 papers 343
seismic surveys; Italy, Tuscany-Latium shelf; shelf; geodynamic implications 350
structure; Komandorskiy Basin; Shirshov Ridge; seafloor spreading 355
Lias, to present; Caribbean Sea; tectonics, geodynamic reconstructions 371
oldest; Pacific; basalts, tholeiitic, alkalic 381
off Morocco, effects on; North Atlantic, SE; hotspot volcanism, Canary 383
kinematics; California, southern; faulting; seismicity 400
P- and S-wave velocity structure; Japan: Sea of; Yamato Basin 402
susceptibility, Koenigsberger ratio; South Africa; Agulhas Bank, SE of; magnetic field, reversals 403
Adriatic Sea, region; waves, body, velocities 407
seismic reflection investigations; Antarctic Peninsula, area; South Shetland Trench; preliminary results debated ... 409
earthquakes, deep-focus; martensitic transformation as possible cause 410
alteration processes; Costa Rica Rift, DSDP Hole 504B; magnetization, implications for 413
Aegean Sea, S; seismicity 417
Tyrrhenian Sea, SE; Mediterranean area; seismicity ... 418
ocean; impact craters; magnetic exploration, model results .. 857
geology; Atlantic; Vema Fracture Zone, transverse ridge; fracture zones 880

deep structure: Japan Arc; seismicity; volcanism; relationships ... 889
deep structure investigations; Baikal Rift; continental rifts; seismic explorations ... 894
discontinuities, segments and giant cracks; mid-ocean ridges ... 895
Tyrrhenian Sea; Alps, western; ophiolites ... 896
mantle; chemical evolution, isotope geochemistry; U.S. report to IUGG ... 898
structure; North Atlantic, Madeira-Tore Rise; seamounts, Josephine Seamount ... 899
porous, deep in; Mexico: Gulf of, Florida Escarpment base; seafloor; bacteria, as producers of methane; seep communities; report ... 1119
uplift; Quaternary; Mediterranean Sea; Cyprus; sea level, change ... 1438
magnetization; Bengal: Bay of; magnetic field ... 1465
mantle, upper; radiogenic heat, production model ... 1471
Canada, offshore; Jeanne d'Arc Basin; lithospheric heat flow ... 1472
Guinea: Gulf of; Niger Delta; fracture zones; magnetic field, anomalies ... 1477
structure; Baltic Sea, S, Tornquist Zone; seismic surveys, deep ... 1511
Scandinavia; Iceland; lithosphere, imaging and understanding; mantle; symposium ... 1513
structure; Labrador Sea; Greenland Sea; margin; new seismic data ... 1514
deep structure, seismic imaging; Australia, Gippsland and Bass basins ... 1516
density, elasticity; seafloor compliance; observations ... 1517
lower; Baikal Rift; mantle, upper; seismicity, generation ... 1518
deep seismic transects across; Svalbard, margin; Barents Sea; continent-ocean boundaries ... 1521
seismic structure; Iceland, and surrounding area; basalts ... 1522
Baltic Sea, S, beneath; lithosphere, lower, seismic models; mantle, upper ... 1525
fossil ore bodies; Cyprus; Troodos; ophiolites ... 1531
seismic reflectivity; Skagerrak ... 1537
structure; Norway, off, 62-70 N; margin ... 1547
Ryukyu Arc, and Trench, beneath; seafloor; electrical conductivity; subduction, relation to ... 1552
Barents Sea; seafloor, structure at depth ... 1554
structure; India, W margin off Goa and Mulki; gravity field, anomalies ... 1555
fossil slow-spreading center; California; ophiolites, Trinity; hydrothermalism; isotope evidence for multistage hydrothemal alteration ... 2077
structure; extensional tectonics, mechanism; gravity field, anomalies, constraints from ... 2122
neotectonics; fault zones; special issue ... 2124
structure inferences; backarc basins; volcanic rocks ... 2145
flexural extension in foredeeps; collision tectonics ... 2151
Alaska, Sitka Sound, from; British Columbia, Atlin Lake, to; continent-ocean transitions; northern Cordilleran transect ... 2152
Mediterranean Sea; Bannock Basin; sediments, evidence of relief inversion ... 2153
sediments, recycled, isotope evidence for involvement; diamonds, formation; mantle, interactions with ... 2155
lithospheric stress, nature and determination ... 2160
seafloor; horizontal dimensions and lateral variability of geological singularities ... 2161
Costa Rica Rift; lithospheric heat flow; seismicity, lateral heterogeneities in seismic velocity; DSDP site 504 ... 2164
structure; Pacific; Shatskiy Rise, N of ... 2165
upper, structure; Japan Trench, across, at 40°N; seismic data ... 2166
seismic sequence analysis; Indian Ocean; Mascarene Ridge, central zone ... 2167
structure; Indian Ocean, deep basins; Exmouth Plateau ... 2168
tectonics; thrust-induced layering ... 2169
structure; Alboran Sea ... 2170
seismic; Japan Trench, inner slope ... 2177
structure, constraints on; Tonga Trench; seismic waves, source radiation patterns; subduction zones, beneath ... 2179
seismic structure; porosity; importance of aspect ratios ... 2181
Kurile Arc, islands, beneath; mantle, upper; structure and composition ... 2182
stable frame of reference selection; sea level; eustasy, changes due to ... 2610
roots, dynamics; eclogites, formations; continental collisions, zones ... 2639
resistivity structure; East Pacific Rise, near 13°N ... 2642
Kenya; East African Rift, beneath; mantle, upper; seismic imaging ... 2643
Nova Scotia; mantle, upper; margin, seismic profile across ... 2646
OBS observations; Crete: Sea of; Mediterranean Sea; lithosphere, S-wave attenuation in ... 2648
lithosphere, dynamics; plates; approach to modelling ... 2649
beneath; Africa, East; East African Rift, System; continental rifts; asthenosphere, intrusions ... 2888
oceanic; ophiolites, on land; report ... 2889
oceanic, through; Pacific, central equatorial; seawater, large-scale advection ... 3058
structure variations; Mediterranean Sea, E, margins; faulting, transcurrent ... 3112
seismic anisotropy, advances in research; geophysical exploration ... 3114
stress state; earthquakes, recurrent; faulting, strike-slip cycles 3120
Krafla; Iceland; volcanism ... 3122

crust: continental
collision tectonics; subduction, and eduction; model ... 398
lithosphere, continental, thickness; mantle convection, second-scale, influence ... 1549
speculation on its evolution ... 3121

Crustacea
hyperbenthic; Sweden, Gullmarfjord; benthic fauna ... 506
chirostylid, galatheid; Coelenterata, associates of; Echinodermata, associates of; submersible collections ... 519
estuarine, 2 spp., genetic structure; organophosphates; pollution, effects ... 1041

crustal accretion
Mariana Arc, forearc; North Pacific, W; tectonics ... 839

crustal deformation
plate tectonics; conference papers; 17 papers, 29 selected abstracts ... 361
Andes Mountains, central; subduction zones; flow model derivations ... 373
pre- and post-seismic; Japan: Sea of; earthquakes, 1983 ... 412
tectonics, block rotation ... 416
plate motions; U.S. report to IUGG ... 869
zone; lithosphere, upper oceanic; microstructural evolution, DSDP Hole 504B ... 878
Pacific, equatorial; Tonga; seismic strain, rate ... 886
global positioning; spectral comparison of GPS and strainmeter measurements ... 905
measurement; Global Position System, use; precision and accuracy of interstation vectors ... 1358
measurement; Global Position System, use; influence of errors in orbit determination networks ... 1359
Neogene; North Pacific, NE margin; plate motions ... 1481
Neogene, to Quaternary; North Atlantic; Gorringe Bank; tectonics ... 1483
Sumatra; arc tectonics; plate motions ... 1539
sea level, rise, separation of causes; subduction zones; determining secular variation ... 1822
and stress; transform faults, weak, along ... 2184
contemporary; Philippine Sea Plate, bending accelerated; Izu Peninsula ... 3085
Quaternary; Djibouti; Asal Rift; spreading ridges, slow-, mechanics ... 3093

crustal uplift
Europe, N, postglacial rebound ... 2117

cryosphere
data; satellite imagery, DMSP-SSM/I; status, research applications ... 2864

cryosphere: global
ice sheets; glaciers; state of balance ... 1210

cryptofauna (More at FAUNA ...)

Cryptomonas
maculata; ultraviolet light, effects; flagellates; biochemical and spectroscopic analysis ... 2836

cryptozoology
role; marine fauna, achieving an exhaustive inventory ... 1641

CTD
and oxygen, nutrient profiles; North Pacific, 47°N, 152°W; water column, properties ... 631

CTD sensors
salinometers; instrumentation, history ... 1106

Ctenophora
new species, invasion by; Black Sea, epipelagic zone; planktonic communities, structure ... 2229
Cnidaria; plankton, competitors in; predation; review ... 2791

Cnidaria; selected bibliography 2796
Coelenterata, biology; Cnidaria; recent research; conference papers 2797
Cuba
W; Holocene; tectonics 354
E; ophiolites 1541
Batabano Bay; organic matter decomposition; microbiota, heterotrophic, by 1661
Cienfuegos Bay; heavy metals; fish, *Micropogonias furnieri*; baseline 2320
culture (See also AQUACULTURE, and specific organisms ...)
Cumacea
Leuconidae, family revision 2825
cumulus clouds (More at CLOUDS ...)
cumulus convection
tropical; North Pacific; atmospheric oscillations, intraseasonal; ocean-atmosphere interactions 147
Curidia
magellanica n.sp.; Magellan Strait; Amphipoda, ochlesid .. 508
current<s> (See also eddies, drift, gyres, jets, meddies, meanders, rings; more at OCEAN ...)
current drifters
eddies; SOFAR float developments, applications 1061
current filaments
cold; California, N, off; coastal zone, transition; structure, dynamics 667
cold; California, N, off; Point Arena; physical structure June 1987 673
cold, nature of; California Current, system; coastal zone, transition 674
subduction; California, N, off; coastal zone, transition area 720
current jets
California, N, off; coastal zone, transition area, dynamics; nonlinear finite amplitude behavior 651
coastal; California, N, off; linear stability analysis of the coastal transition zone jet 661
by; eddy entrainment 724
California, off Point Arena; Copepoda; Eucalanus, californicus, jet role in aspects of secondary production 1011
meanders, evolution; vorticity fronts, along 1156
particle-laden, from; sound scattering; acoustics 1863
California, N, off; phytoplankton; biomass transport; cool filament chemical and biological structure 3255
current meter compasses
nonlinear response 1797
current meters (More at METERS ...)
ADCP; performance in near surface and bottom boundaries ... 1140
acoustic Doppler; instrumentation, comparison 1142
acoustic correlation 1143
ACDP; broad-band, performance 1144
acoustic Doppler 1145
ACDP; design and tests of trawl-resistant package 1146
acoustic Doppler; hydrographic surveys; use in mesoscale surveys 1149
with intelligent data system, environmental sensors, and data telemetry 1150
mechanical; measurement degradation by mooring or wave motion 1155
vector-measuring; high-speed real time data acquisition 1157
acoustic; error analysis 1162
ACDP; single ping data 1163
acoustic Doppler; gravity waves, surface; field verification of measurements 1177
current shear
stresses and velocities; wave-current interactions; flow, over rough beds; model 723
and strain; California, off; Santa Monica Basin; eddy diffusivity; CTD profile results 1228
Pacific, E central; waves; variability 1232
current transport
coastal zone; use of simulated drifter tracks to investigate patterns and residence times 640
Kuroshio; estimates using an inverse technique 652
California, N, coastal transition zone; nutrients, distribution, effects; phytoplankton, biomass, species composition; primary production 925
Gulf Stream, meander; satellite imagery 1151
indications from undersea telephone cables 1153
and structure; Indian Ocean, W; East African Coastal Current 2906
currents
Taiwan, N of; Kuroshio, branch current 24
energetics; Kuroshio, Extension 26
South China Sea; numerical simulation; in Chinese, English abstract 28
Japan; Tsushima Current, nearshore branch structure, summer 30
tidal and residual; China; Bo Hai; baroclinic flow; model; in Chinese, English abstract 33
vectors, rotary spectra; China, Dongsha Islands; time series analysis; in Chinese, English abstract 34
Gulf Stream; Cape Hatteras, N of; North Atlantic, NW; water masses 35
circulation; eddy transport, and advection; observing with floats 636
subtidal Eulerian; straits, East River 654
Peru Undercurrent, variability 655
California, N, off; water masses; coastal zone, transition; summer 1988 studies 656
North Pacific, XCP section across 25°N; eddies 660
Gulf Stream, nonlinear behavior of varicose disturbances 662
Florida Current, sources; Sverdrup transport 663
tidal and buoyancy-driven; Fundy; Bay of, Chignecto Bay .. 664
California, N, off; coastal zone, transition area, dynamics; flow, assimilation modelling studies 665
observations; Antarctic Circumpolar Current; South Atlantic, W, deep boundary current 666
California, N, off; coastal zone, transition, structure; frontal jets 671
South Atlantic, E; upwelling filaments 679
wind-driven; Australia, NE; Torres Strait; sand waves, subtidal dunes; dune asymmetry reversal with reversing currents 817
surface, and recirculating cells; bubble curtains, and jets, generated by 1076
velocity data; instrumentation, comparisons 1138
measurement capabilities; instrumentation 1139
temperature; correlation 1141
ADCP measurements; signal processing, techniques for tide removal compared 1147
Australia; Leeuwin Current, mesoscale structure; laboratory models and satellite imagery compared 1158
accurate measurements using drogued buoys; circulation 1161
deflections; seamounts, multiple, in the vicinity of 1164
continuous, by; turbidites, generation; in French, English abstract 1381
response to; Amphipoda; Pontoporeia, affinis; factors affecting horizontal migration 1681
seasonal variations; North Atlantic, W subtropical; circulation; volume transport 1768
near-shore dynamics; tides; HF radar observations 1782
California Current, system energetics modelled; circulation 1794
jets, midlatitude, separation; influence of model boundary conditions 1798
under-; undertows, modelling; turbulence 1799
Australia; Leeuwin Current, driving forces; Pacific; wind, and heating, role 1800
boundary layers, western; circulation; viscous instabilities . 1801
Antarctic Circumpolar Current, model; vorticity, dynamics of seasonal variations 1802
near-bottom; Mediteranean Sea, E of Crete 1803
seasonal variations; West Spitsbergen Current; Arctic Ocean; bottom pressure 1806
mean flow and variability; Kuroshio, Extension; remote sensing, data 1809
measurements; drifting buoys; Decca Navigator, Argos 1810
volume transport; instrumentation, POGO; measuring mean velocities 1811
Newfoundland, NE shelf; frontal oscillations 1817
waves; flow, combined, velocity distributions in 1837
buoyancy, effects; velocity shear; nonlinear interactions in a stratified fluid 1879
velocity fluctuations; density, probability distribution; pycnocline, Richardson numbers; analytic approximation ... 1888
large-scale; 2-D model 1890
and oil inputs; Caribbean Sea, W; bacteria, oil-degrading; petroleum biodegradation 2324
Korea, South Sea; seawater; temperature, variations; in In Korean, English abstract 2403
Korea, southern sea; seawater; physical processes influencing chlorophyll, nutrient distributions 2408
Gulf Stream; Blake Plateau, over; rings; coalescence event 2412
Gulf Stream, effects on ocean waves; waves 2432

tidal, vertical structure; China; Huanghai Sea, N; internal tides, effects ... 2455
fluid dynamics; flow; vorticity; salt fingers; lab experiments in physical oceanography; collection ... 2489
variability; Bengal: Bay of, N; monsoons, summer; air-sea interactions ... 2516
confluences, at; Angola Current; Benguela Current; Siphonophora, vertical distribution of 34 taxa ... 2789
radar imagery; waves, monochromatic; simulation ... 2894
ADCP measurements; Gulf Stream, deep ... 2903
Somali Current; Arabian Sea; undercurrents, seasonal, modelling ... 2904
currents: bottom
Canary Upwelling, vicinity; upwelling, areas, dynamics ... 1152
currents: boundary
Arabian Sea, Basin ... 27
western; flow, nonlinear, near a corner ... 31
California, N, off; coastal zone, transition; boundary currents; filament formation and evolution, dynamical simulations ... 669
coastal; density fronts; instability and nonlinear evolution; in Japanese, English abstract ... 1167
extensions; Rossby waves, stationary ... 1172
western; equatorial undercurrents; relationship ... 1807
surface; Algerian Current, application to; lab study ... 2410
currents: coastal
evolution; escarpments, wedge-shaped, over ... 124
Iberian Peninsula; North Atlantic, E; Lagrangian circulation; coastal zone, transition ... 639
and filaments; California, N coast; the Coastal Zone Transition Program; collection; 23 papers ... 1112
shortwave instabilities ... 1231
India, W, off; monsoons, NE, during ... 2414
currents: equatorial
SSEC; South Atlantic; geostrophic transport ... 32
zonal geostrophic; dynamic topography ... 1770
Atlantic; Pacific; wind, as forcing agent; contrast in seasonal cycles ... 1808
currents: Eulerian
electromagnetic field, induction in the ocean; comparison .. 2461
currents: gravity
atmospheric; breezes, land, sea; sea breeze fronts; inland penetration, Kelvin-Helmholtz billows ... 754
turbulent plumes, generated by; sedimentation ... 2039
boundary mixing; propagation along an incline ... 2413
currents: longshore
lab studies, relevance to theory ... 25
beaches, bar and trough; numerical model ... 29
lab measurements ... 1814
currents: monsoon
Indian Ocean, tropical; wind-driven flow, and geostrophic 2411
currents: shelf
Canada, W coast; mixing; physical oceanography ... 1763
and slope; Great Barrier Reef; momentum, linear systems analysis; flow ... 2901
currents: tidal
M_2; East China Sea, NE; 3-D model ... 46
M_2; metered observations vs Schwiderski and Laplace models .. 658
migration, vertical; biota ... 1593
interactions; Georges Bank; North Atlantic; eddy flux, skew eddy fluxes ... 1804
North Atlantic, eastern basins ... 2905
South China Sea, N; tides ... 2909
currents: turbidity
duration; the Bouma division A ... 267
submarine flowslides; physics, modelling ... 272
density, stable gradient, erosion of; convection, sedimentation-driven ... 1230
currents: wind-driven
stochastically forced model ... 1812
currents: zonal
variations; Pacific, central tropical; sea level, dynamic height data 1970-1987 ... 2415
cusps (More at COASTS, SEDIMENTARY STRUCTURES...)
cuttlefish
resources; Japan, in; squid, resources ... 1735
cyanobacteria (More at BACTERIA ...)
North Pacific, W, summer '89, distributions; picophytoplankton ... 450
foraging on; Copepoda; chemical defenses, response to; resource abundance effects ... 2276
nitrogen fixation ... 2312
chroococcoid; Protozoa, grazing by; bacteria, heterotrophic; plankton, communities ... 2673
mat-forming; Microcoleus, chthonoplastes; Oscillatoria, limosa; interactions; bundle formation and de novo mat genesis ... 2748
Trichodesmium; nitrogen fixation, regulation ... 2756
mat-building; anoxic sediments; sulfur, metabolism ... 2773
North Atlantic; Trichodesmium, major role; nutrient cycling ... 3153
cyanobacterial mats
North Sea, Wadden Sea; nitrogenase, diurnal activity ... 2775
biofilms; stromatolites; geophysiology ... 2833
cyclogenesis
mesoscale; Ross Sea, SW, over; wind, strong katabatic; relationship ... 760
cyclones (More at STORMS ...)
within; waves, height and period; prediction based on wind speed ... 2450
India, over seas around, 1989; atmospheric depressions ... 2545
cyclones: tropical
South Pacific; Indian Ocean, SE; 1988-89 season ... 156
atmospheric waves, unstable inertia-gravity; typhoons, development; effects on storm development ... 158
Atlantic, 1990 ... 757
storm forecasting, landfall and structure; model sensitivity to soil moisture parameterizations ... 761
atmospheric convection; variations caused by upper-tropospheric troughs ... 765
motion; weather forecasting; interactive analysis and forecast system ... 1291
moving; ocean-atmosphere interactions; mutual response . 1913
motion; barotropic shear flow, in ... 1933
post-monsoon activity; Indian Ocean, N, over ... 2546
Cyclonic Extratropical Storms Project (Use CYCLES)
Cyclope
neritea, spread; North Atlantic, W coast; Mollusca; relation to oyster culture and climatic fluctuations ... 505
Cyclopoida
Calanoida; zooplankton; long-term experiments on interactions ... 1012
Calanoida; phytoplankton; zooplankton; short-term experiments on interactions ... 1013
Louisiana; Metacyclops, cushae n.sp. ... 2819
ecology; India, SW coast; Laccadive Sea ... 2821
California; Halicyclops, revision and 1 n.sp. ... 3185
Cyprus
Quaternary; Mediterranean Sea; crust, uplift; sea level, change ... 1438
Troodos; ophiolites; crust, fossil ore bodies ... 1531
cytological detoxification
invertebrates; contaminants, metal; microanalytical applications reviewed ... 561
CZM
U.S.; shoreline dynamics; coasts, historical changes; erosion, mapping ... 251
beach replenishment; shoreline dynamics; discussion ... 257
estuarine waterways, projects; navigation, channels, maintenance ... 583
failings; South Carolina, Folly Beach; coastal development; hurricanes, Hugo 1989; erosion policy, national, needed ... 2875

Danube River
submarine alluvial cone; sediments; structure at depth ... 245
Darss-Zingst Bodden
chain; Germany; eutrophication; water quality, possible restoration measures ... 3040
data
analysis, manipulation; statistical analysis; computer technology, computational ... 575
data: altimeter
satellites, Geosat; improvements ... 3226
data: climate
remote sensing, satellite; derivation of long-term sets ... 2501
data: depth
hydrographic surveys; assessing data precision ... 1056

data: echo sounder
signal processing, postprocessing system; acoustics 91
data: ecological
measurements; sampling, choice of sample size 2664
data: experimental
spikes in; signal processing, hydrooptical investigations; algorithm for spike rejection 1216
data: geophysical
display, interpretation; computer graphics; image analysis; signal processing 2006
data: geoscience
computer technology; a new approach 1360
data: magnetic
modelled; Japan Arc, NE; subduction zones 340
data management (See also the various scientific disciplines; more at information management ...)
data: meteorological
satellites, polar orbiting; NESDIS operational sounding products 2865
data: oceanographic
assimilation; geostrophic flow, quasi-; optimal interpolation, model 622
signal processing; interpolation method for ocean and estuarine studies 1060
Southern Ocean; examination of several data sets 1066
data: positioning
satellites, U.S. GPS; discontent over restrictions on data 1104
data: satellite
SMMR; surface temperature 2391
precipitation, estimation 2542
Image Library and Browse System 2857
center, role; climate, and circulation, studies 2858
accessibility at the National Climatic Data Center 2859
on-line inventory of NCDC's polar orbiter 2860
data: scientific
South Pacific, a decade of research; the marine geoscience data base 3231
data: seismic
refraction profiles; signal processing; isolation of source and receiver statics and scale factors in waveform inversion ... 1361
data telemetry (More at TELEMETRY ...)
ocean; sensors, underwater; new methods for real-time observations 1054
instrumentation, systems; recent developments at Woods Hole Oceanographic Institution 1715
long-range; instrumentation, packages; frequency-agile HF packet-switching protocols 2893
databases
international; Aquatic Sciences and Fisheries Information System; history, developments; French and English . 578
Global Paleomagnetic Database; magnetic field, data; design, installation, and use with ORACLE 1463
databases: climatic
ATMOES; atmospheric temperature; satellites, operational environmental 2861
databases: online
Internet, sharing data over; research institutions, linking .. 1718
dataloggers
Cetacea, identifying vocalizing dolphins; vocalizations 965
dating (More at GEOCHRONOLOGY ...)
methods; geological record; review 2005
isochrons, calculating; chronostratigraphy; precision of age measurements by Rb-Sr isochrons 2010
U/Th; corals, age; interglacials, age of last one 3071
dating: thermoluminescence
California, N; coastal sediments 1385
DDT
Adriatic Sea, E, long-term trends; coastal sediments; organochlorines; PCBs 3041
Dead Sea
bacterial growth, rates; blooms, halobacteria; heterotrophic activities 2757
Dead Sea Rift
along; seismicity, 4000 yr 2640
East African Rift System, Afro-Arabian Rift; Aden; Gulf of; Red Sea Rift; continental rifts; overview 3086
continental rifts; spreading centers 3096
debris (More at SEDIMENTS ...)
debris flows: pyroclastic
Japan, shallow submarine Shirahama Group; paleomagnetic evidence 3110
debris ingestion
Florida; manatees; Trichechus, manatus 2838
debris: organic
particulates; margin sediments, contributions to 1328
debris: planetary
cosmic particulates; does it impact Earth? 2891
debris: pyroclastic
fallout; volcanic eruptions, submarine; sediments, volcanic deposits 376
Decapoda
Namibia, off; South Atlantic, E; biogeography, community structure 1008
grapsid; U.S., Atlantic coast, first discovery 1988; Hemigrapsus, sanguineus, a W Pacific crab; exotic species .. 1009
Pacific, E; Anomura; Pagurus, lepidus complex, 3 n.spp. .. 1677
Scylla, serrata, effects on behavior; toxicities, acute; pesticides, 3 1707
Zostera, marina, eelgrass beds; Ulva, lactuca, sea lettuce beds; fish, epibenthic; marsh creeks; habitats comparison 2252
Callinectes, sapidus postlarvae, predation on; Crangon, septemspinosa, by; Palaemonetes, pugio, by 2288
shrimps; Southern Ocean; spatial distribution photographed underwater 2807
53 spp.; comparative fecundity 2818
Talitrus, saltator (British sandhoppers); solar orientation .. 2822
shrimps; North Atlantic; Caribbean Sea; Pasiphaeidae, including 1 n.sp. 3188
Deccan Traps
flood volcanism; Indian Ocean; Seychelles, in; tholeiitic dykes 2631
decomposition
dependence on temperature, concentration; estuarine chemistry; dimethylsulfide, and DMSP 2259
decomposition: carbon
organic; North Pacific; carbonate dissolution, rates 217
decomposition: macroalgal
microbiota; meiofauna 535
decomposition: organic matter
Cuba, Batabano Bay; microbiota, heterotrophic, by 1661
decompression chambers (More at chambers ...)
decompression sickness (More at DIVING ...)
deep circulation (More at CIRCULATION ...)
rapid transitions; surface water fluxes, changes in; relationship 17
South Atlantic, E 648
Samoa Passage, into; Pacific; abyssal flow 675
North Atlantic; deglaciation; glacial meltwater, discharges; climate change, abrupt, 15-10 kyBP 1432
effects; ocean reservoir characteristics 1789
Deep Sea Drilling Project (Use DSDP)
deep towing (More at TOWING ...)
Deep Undersea Muon and Neutrino Dectector (Use DUMAND)
deep-sea resources
seafloor, use and misuse; waste disposal; international law 2364
deep-sea warming
abrupt; Paleocene, end; mass extinction, benthic; paleocirculation, changes 1433
deformation: crustal
plate tectonics; conference papers; 17 papers, 29 selected abstracts 361
Andes Mountains, central; subduction zones; flow model derivations 373
pre- and post-seismic; Japan: Sea of; earthquakes, 1983 ... 412
tectonics, block rotation 416
plate motions; U.S. report to IUGG 869
zone; lithosphere, upper oceanic; microstructural evolution, DSDP Hole 504B 878
Pacific, equatorial; Tonga; seismic strain, rate 886
global positioning; spectral comparison of GPS and strainmeter measurements 905
measurement; Global Position System, use; precision and accuracy of interstation vectors 1358
measurement; Global Position System, use; influence of errors in orbit determination networks 1359
Neogene; North Pacific, NE margin; plate motions 1481
Neogene, to Quaternary; North Atlantic; Gorringe Bank; tectonics 1483
Sumatra; arc tectonics; plate motions 1539
sea level, rise, separation of causes; subduction zones; determining secular variation 1822

and stress; transform faults, weak, along 2184
contemporary; Philippine Sea Plate, bending accelerated; Izu Peninsula 3085
Quaternary; Djibouti; Asal Rift; spreading ridges, slow-, mechanics 3093
deglaciation
major; Northern Hemisphere, 140 kya; atmospheric moisture, deficit 316
North Atlantic; glacial meltwater, discharges; deep circulation; climate change, abrupt, 15-10 kyBP 1432
during; Alboran Sea; productivity 1455
during; Pleistocene, Late; Iceland, beneath Snaefellsjokull Volcano; mantle melting, increased; volcanism 1498
post-glacial rebound; Iceland; asthenospheric viscosity ... 1553
degradation
of alpha-hexachlorocyclohexane; is it stereoselective?; bacteria 1033
degradation: hydrocarbon
polluted sediments; drilling muds, low-toxicity base oil ... 1994
degradation: microbial
crude oil, evaporitic 550
oil slicks; enhancement using slow-release fertilizer; in Chinese, English abstract 591
degradation: photochemical
organic matter, DOC; carbon cycle, oceanic, impact on ... 1348
Delaware Estuary
suspended sediments; phosphorus, particle-bound 2577
Delphineis
karstenii; South Atlantic, E; sediments, pelagic; diatoms, displaced neritic 330
Delphinidae
mercury, accumulation 2313
delta sediments
Egypt; Nile Delta; facies analysis 823
Quaternary, Late, evolution; Nile Delta, Burullus Lagoon region; shoreline dynamics 1365
Holocene; Nile Delta, N plain; petrology, distribution, deposition of plant-rich sequences 1367
Miocene, lower; Atlantic, E equatorial; Niger Delta, Afam clay member 1395
Holocene; Nile Delta; Egypt; Mollusca, faunas, paleo-bathymetry 1443
deltaic lagoons
nutrients, profiles; pore water; benthic fluxes 1975
deltas
and spits, littoral terraces; Quaternary, Late; Iceland, northern; sea level, rising; shoreline dynamics 260
demand analysis (More at RESOURCE MANAGEMENT ...)
demersal zooplankton
Barbados; coral reefs; plankter patchiness and composition . 2217
dendrochronology
Pleistocene-Holocene boundary; stable isotope tree ring time scale 2080
denitrification (More at NITROGEN CYCLE ...)
Baltic Sea; Kiel Bight; coastal sediments; in German, English abstract 221
and dissolved inorganic nitrogen exchange; Polychaeta; Nereis, virens, burrows; direct measurement 466
temporal variability; estuarine sediments 494
Arabian Sea, geographic extent in 3035
denitrification: sediment
Baltic Sea; Kiel Bight; eutrophication 2741
Netherlands; Wadden Sea; intertidal sediments 222
Denmark
Greenland; Cetacea; organochlorines; porpoises, harbor 2321
densities: population
sampling, optimum size unit 430
density
ratio distribution; South Atlantic; pycnocline, salt finger susceptibilities 625
thermohaline staircases; temperature; salinity; fluxes across the interface 1227
stable gradient, erosion of; convection, sedimentation-driven; turbidity currents 1230
probability distribution; pycnocline, Richardson numbers; currents, velocity fluctuations; analytic approximation ... 1888
density currents (More at CURRENTS ...)
density fronts
boundary currents, coastal; instability and nonlinear evolution; in Japanese, English abstract 1167
density intrusions
Washington State; Puget Sound; circulation 1130
density stratification
Japan, Hiuchi-Nada; roles of horizontal processes in formation 1886
deoxyribonucleic acid (Use DNA)
deposit feeders (More at FAUNA ...)
Scrobicularia plana, effects; tin; tributyltin, sediment-bound; bioavailability 3210
deposition (More at SEDIMENTATION...)
sediments; erosion; measurement sensor 269
structural control of; Maine: Gulf of; tidewater glaciers; sedimentation 2032
deposition: atmospheric
World Ocean; trace chemistry 2510
coastal zone, waters; nitrogen, inputs 2511
Mediterranean Sea, W; nitrogen, inorganic 2957
deposition: pollutant
dry, modification; sea breezes, developing circulation 1948
deposition: terrigenous
sources; sediments; hydrothermalism, quantifying inputs .. 304
depositional environments
Mediterranean Sea, Gulf of Lion and Ebro continental margins; submarine valleys 242
Arabian Sea, SE; sediments, $CaCO_3$, organic C, and sulfide S variations 1402
Barents Sea, N, outside Nordaustlandet; tidewater glaciers, sub-polar; sediments 2038
deposits (More at SEDIMENTS ...)
deposits: calcareous
bacteria, effect of 485
deposits: hydrothermal
California: Gulf of; Guaymas Rift; nature of naphthoids . 424
Juan de Fuca Ridge; sulfides, massive, radial growth rates and Pb-210 ages 1411
South Pacific, W; Lau Basin, tectonic environment; geochemistry 3062
Fe-rich; South Pacific, W, Teahitia-Mehitia, Mcdonald hot spot areas 3065
North Fiji Basin; Pacific; ferromanganese oxides 3142
deposits: mass flow
Iceland, S shelf; basalts, hyaloclastite; volcanism, subglacial eruptions 2629
deposits: ore
sediments; oceanic cycles as control 615
deposits: sulfide
pelagic; Mid-Atlantic Ridge, along, adjacent to; patterns of distribution, mantle spicule theory 1391
depressions: atmospheric
India, over seas around, 1989; cyclones 2545
depressions: monsoon
wind field; clouds, structure 2530
depth data
hydrographic surveys; assessing data precision 1056
desalination: seawater
freshwater, production of; technologies 812
deserts: benthic
Baltic Sea; Gotland Basin, floor and slope; zoobenthos, of 'desert' and transitional zone above 2249
design: statistical
framework for enhancing; environmental research 1051
designer fish
test-tube; genetic engineering; exotic species, invasions; cautions required 2367
detoxification: cytological
invertebrates; contaminants, metal; microanalytical applications reviewed 561
detritus (More at PARTICULATE MATTER ...)
available and refractory nitrogen in; plants, vascular; macroalgae 480
and nutrients, annual material processing; South Carolina, Bly Creek system; marshes; estuaries 482
amorphous; nitrogen, assimilation from; fish, *Cyprinodon variegatus*; shrimp, *Palaemonetes pugio* 959
nutrients, particulate organic, biologically imported; food webs, importance in; reef communities 1340
detritus: seagrass
Thalassia, hemprichii, litter biodegradation; fungal biomass, significance 992
detritus: suspended
Arabian Sea; energy content 2576
developing countries (See also technology transfer, Third World, world- ...)
developing nations
environmental protection, marine; what cost? 2879

development
implications, applications; artificial islands, offshore; report . 2353
development: coastal
South Carolina, Folly Beach; hurricanes, Hugo 1989; erosion policy, national, needed; CZM, failings 2875
Diadema
antillarum; North Atlantic, and elsewhere; Echinoidea; mass mortalities; report 618
diagenesis
early; Weddell Sea, S and E; sediments; carbon, organic, and opal; in German, English abstract 274
amino acid-, organic C and N mineralization; Norway, Oslofjord; fjord sediments 282
diagenesis: sediment
North Sea, Eldfisk Field; chalks, sedimentology 2058
Mediterranean Sea, E; sapropels; barium, mobilization .. 2074
mudrocks; North Sea, Kimmeridge Clay Formation 3055
diamonds
nm-size; Cretaceous-Tertiary boundary; Alberta, (Canada); boundary sediments 835
formation; sediments, recycled, isotope evidence for involvement; crust; mantle, interactions with 2155
diapirism: clay
Caribbean Sea; Barbados, prism; margin sediments 1392
diapirs (More at LITHOSPHERE ...)
diapirs: clay
Baltic Sea, area; Skagerrak; sediments, gas-charged; pockmarks 3133
diapirs: salt
North Sea, Lulu-1 wells; velocity assessment 2593
diatom frustules
dissolution enhanced; iron oxides, by 1451
diatomaceous ooze (More at OOZE ...)
diatoms (More at FLORA ...)
displaced neritic; South Atlantic, E; Delphineis, karstenii; sediments, pelagic 330
Chile, Gulf of Arauco; Dinoflagellata, thecate; species composition, abundance, chlorophyll maximum 541
drawing methods; Bacillariophyceae 542
tin, organotins; toxicities; in Chinese, English abstract 570
epipelic, seasonal changes; U.K.; Somerset, Berrow Flats; intertidal zone 1024
unusual layers; Pleistocene, upper; Weddell Sea, N; sediments 1450
sediment trap assemblages; Antarctic Peninsula, N 1694
drawing 1695
illustrating by photomicrography 1696
spring maximum, decline of; Asterionella, formosa; irradiance, high, responses to 1697
as sources; food webs; carbon, C-13 rich 2212
movement; review 2311
distribution; Weddell Sea; sea ice; chlorophyll 2674
Thalassiosira, pseudonana; photosynthesis, inhibition; radiation, UV, function of dose and dosage rate 2832
Ceratium, bloom decline; zooplankton grazing 3158
dichlorodiphenyltrichloroethane (Use DDT)
dichlorophenyl dimethylurea (Use DCMU)
Dick: Thomas
1838 book, first mention of the possibility; continental drift . 2887
Didemnum
moseleyi; Ascidiacea; invertebrate colonies, size, shape effects; rates of fission, fusion, growth, mortality 996
moseleyi; colonial invertebrates; reproduction, sexual vs asexual and density of neighbors 997
candidum; larval recruitment, abundance, settlement, juvenile mortality; effects on depth distribution of this colonial ascidian 1670
diffusion (See also double diffusive convection; more at FLUID DYNAMICS ...)
estuarine hydrodynamics; numerical experiments; in In Korean, English abstract 2479
diffusion: eddy
phytoplankton; nutrients; estimating coefficients 451
diffusion: turbulent
models; fluid dynamics; Lagrangian representation 120
Gibraltar: Strait of; salinity, anomaly 1958
fluid dynamics; Rossby waves, barotropic; applications ... 2942
diffusive interfaces (More at INTERFACES ...)
thermohaline staircases; salt fingers, and intrusions 2481
diffusive interleaving
double; Equator 112
diffusivity: eddy
California, off; Santa Monica Basin; current shear, and strain; CTD profile results 1228
horizontal; fractal analysis, dimension of drifter trajectories . 1250
diffusivity: isopycnal
Sargasso Sea 108
diffusivity: thermal
thermocline, theory 1883
dikes (Use dykes)
dimethylsulfide
North Pacific, over; clouds, condensation nuclei; correlations 162
chemical analysis, isotope dilution GC/MS 181
from phytoplankton; sulfate aerosols, natural marine; geophysiology 768
effects of; aerosols, marine, concentrations; marine boundary layer 770
emissions, seasonal variations; North Atlantic, W, over; sulfur; nitrogen; atmospheric chemistry 1938
and DMSP; estuarine chemistry; decomposition, dependence on temperature, concentration 2259
dimethylsulfoniopropionate
production, consumption; microbial mats 2262
Dinoflagellata
Prorocentrum, micans; migration, vertical; phototaxis, and gravitaxis 538
thecate; Chile, Gulf of Arauco; diatoms; species composition, abundance, chlorophyll maximum 541
Gyrodinium, aureolum; plankton, decimeter scale heterogeneity; pycnocline, blooms in 922
heterotrophic, quantitative importance and trophic role; pelagic food webs 933
Southern Ocean; plankton growth, and herbivory; possible effects on phytoplankton biomass 1022
resting cysts; sediments; separation and concentration via centrifugation 1025
Gonyaulax, catenata; Mesodinium, rubrum; plankton, vertical migration 1609
Gulf Stream, filaments, carried on; Gymnodinium, breve; phytoplankton blooms; red tides, expatriate 2834
dinoflagellates (Use Dinoflagellata)
Dinophyceae
Prorocentrum, minimum; nitrates, uptake; phytoplankton growth 543
discharges: groundwater
submarine; Sweden, Laholm Bay 3067
discharges: pollutant
U.K., Severn Estuary; environmental assessment 590
discharges: river
Amazon Delta, outflow; shelf sediments 2
Amazon River; geochemical process occurring at the river-ocean boundary 218
influence; Arabian Sea, cores; Indus River; calcium carbonate, content; sediments 2088
Mississippi River, Delta outflow region; trace metals 2583
discharges: watershed
variations, effects; estuaries; nutrients; chlorophyll 2377
discontinuities: mantle
U.S. report to IUGG 879
Discovery Bay
Jamaica; sediments, seismic stratigraphy 314
diseases
Black Band Disease; Caribbean Sea; oral reefs; reefs; coral 2784
dispersion (More at FLUID DYNAMICS ...)
marine; Sellafield, discharges; cesium, -137; Chernobyl fallout 1961
dispersion: chemical
oil spills; droplet size distributions, mathematical model 1085
disposal: dredge spoils
regulation; ocean dumping 1730
disposal products: waste
stabilized coal-waste block; seawater; long-term processes ... 803
disposal sites
cessation of dumping; sewage sludge; macrobenthic communities, recovery 2328
dissolution: carbonate
South China Sea; sediments; in Chinese, English abstract .. 205
rates; North Pacific; carbon decomposition, organic 217
dissolved gases
nitrous oxide, dissolved; automated measurement technique . 1962
dissolved oxygen
fluxes; Kiel Bight; Kattegat; Baltic Sea, area; effect of inflows on deep-water oxygen conditions 204

disturbance: biological
and physical; intertidal macrobenthos, and subtidal; relative significance of disturbances 2239
diversity: faunal
fossil record, a model of onshore/offshore change 851
diving (See also narcosis, decompression sickness, excursion tables, HABITATS ...)
Pinnipedia; Halichoerus, grypus; foraging, behavior; seals, movements 461
hazardous waters; pollution; hypothermia; symposium papers; 16 papers 586
behavior, physiological implications for; marine mammals; blood, hematological and rheological characteristics 2236
patterns and performance; Southern Ocean; Phalacrocorax, atriceps; seabirds, blue-eyed shag 2255
diving physiology
women, scuba divers; potential risks 587
Djibouti
Quaternary; Asal Rift; crustal deformation; spreading ridges, slow-, mechanics 3093
Afar, depression; mantle, sources, changes in; volcanism; rifts, evolution 2656
DNA
and RNA, measurement; phytoplankton; new double-staining technique 915
and RNA, measurements; microbiota; fluorescence, techniques, evaluation 917
dissolved and particulate, dynamics; Antarctic Peninsula; Bransfield Strait, region; phytoplankton blooms, spring 1585
domes (More at LITHOSPHERE ...)
dominance
competitive, in mixed cultures; bacteria, antibiotic-producing . 1658
Donacilla
cornea; Bivalvia; heavy metals, accumulation; calcium, content 1709
Donax
truncules, venustus; North Atlantic, SE; Morocco, coast, distribution along; Bivalvia; in French, English abstract . 3181
downwelling fronts (More at FRONTS ...)
Drake Passage
Southern Ocean; particulates; organic matter; carbon isotopic variations 789
Antarctic Peninsula; Bransfield Strait, and Gerlache Strait; Euphausia, superba; krill; depth relationships of eggs, larvae and adults 1684
dredge spoils disposal
regulation; ocean dumping 1730
dredging (More at SAMPLING, MINING ...)
effects; fouling communities; effects on larval settlement, community development 988
induced by; turbidity plumes 2352
effects; Canada, E; trawling, effects; ocean dumping; shelf 2360
drift: continental
Dick; Thomas, 1838 book, first mention of the possibility ... 2887
drift currents (More at CURRENTS ...)
drift: ice
Newfoundland, NE shelf; wind, forcing, response to 1846
drift: Stokes
wave flumes, in 1178
drifters: current
eddies; SOFAR float developments, applications 1061
drifting buoys
currents, measurements; Decca Navigator, Argos 1810
drilling (More at INDUSTRY, SAMPLING ...)
drilling effluents
contamination by; Arctic area; sediments; trace metals, persistence 1092
drilling muds
cuttings; Bivalvia, adult sea scallops, chronic sublethal impact on 1031
low-toxicity base oil; polluted sediments; hydrocarbon degradation 1994
drilling rigs (More at RIGS ...)
drogues (More at OCEANOGRAPHIC APPARATUS ...)
droplets (More at AEROSOLS ...)
dropstones
sediments, pelagic, soft, high-latitude; rocky mini-islands 297
drugs (See also antibiotics, pharmacognosy ...)
DSDP (See also IPOD, JOIDES ...)
DUMAND
program; neutrinos; Deep Underwater Muon and Neutrino Detector project report 1063
project; seawater, selection of locations with deep water of optimum clarity; neutrinos, detecting 1759
dumping (More at WASTE DISPOSAL ...)
dumping: ocean
of contaminated wastes; metals, enrichment factors 1356
dredge spoils disposal, regulation 1730
Law of the Sea; hazardous waste; transboundary movement 1736
Canada, E; trawling, effects; dredging, effects; shelf 2360
dunes (More at COASTS, SANDS, ...)
dust (More at AEROSOLS, SEDIMENTS ...)
dust: eolian
Mediterranean Sea, basin; atmospheric transport; dust intrusion events 769
Sahara Desert, as origin; Atlantic, trans-; observations, analysis of a Saharan dust outbreak 771
Pacific, N and equatorial; sediments, pelagic; geochemistry, paleoclimate implications 828
dyke<s> (More at IGNEOUS- ...)
dykes: tholeiitic
Indian Ocean; Seychelles, in; Deccan Traps, flood volcanism 2631
dynamic topography
Atlantic, tropical, over 9
satellite altimetry; observations, Seasat 644
ocean; satellite altimetry, Seasat; temporal variability, U.K. studies reviewed 649
sea level, global scale surface variability; circulation; altimetric and tide gauge measurements 650
ocean-atmosphere interactions; circulation; large scale oceanic responses to atmospheric forcing at low frequencies 749
remote sensing; satellites, the TOPEX/POSEIDON mission; report 1070
equatorial currents, zonal geostrophic 1770
New England Seamounts, near; model and observations compared 2399
North Atlantic; remote sensing, Geosat radar altimetry; FASINEX data 2900

Earth (See also asthenosphere, core, crust, expanding Earth theory, LITHOSPHERE, mantle, tectosphere ...)
radiation budget; diurnal variability 1259
bolide impacts, giant; thermal equilibration modelled 2175
density distribution; neutrino tomography 3123
Earth rotation
investigations and interpretations of the fluctuations 1122
accounting for; typhoons, hydrodynamic model 1293
earth science
multivariate analysis, permutation methods; application based on distance functions 237
earth tides
tides, ocean loading; geodesy, Earth response to loading 1469
tectonics; tides as tectonic pump and vibrator 2171
earthquake prediction
seismic hazard analysis; symposium collection; 14 papers .. 907
earthquake seismology (More at SEISMOLOGY ...)
earthquakes
large, source parameters; Aegean Sea, N 408
deep-focus; crust; martensitic transformation as possible cause 410
1983; Japan: Sea of; crustal deformation, pre- and post-seismic 412
great, occurrence and recurrence; subduction zones; simplified slab pull model 419
seismic coupling; Chile, along; subduction zones 421
as ultimate cause; California, Loma Prieta 1989; Moss Landing, Harbor; waves, short-period, generation; landslides, as caused 687
-induced settlement; sediment geotechnical properties; clays 827
micro-; North Sea; seismic waves, arrival time inversion ... 883
micro-; North Sea; seismic waves, arrival times 884
Kurile Arc; seismicity; shear waves; travel time, amplitude, waveform analysis 901
seismic quiescence prior to; Japan, Urakawa-Oki 904

1986, quiescence preceding; Aleutian Arc, Andreanof Island; seismograph reporting history 906
California; San Francisco, 1906; tsunamis, origin 1107
Iceland; tectonics, present; hotspots; plate boundaries .. 1519
S-wave analysis; subducting slabs, deep structure; lithosphere; mantle, penetration into 1523
during the 1989 Loma Prieta quake; California; Moss Landing, onshore and offshore sediments; sediment liquefaction 1526
seismicity, deep; subducted lithosphere, thermal structure . 1527
normal fault; Mozambique, N, off; a possible isotropic source 1529
plate boundaries, ridge/transform fault, at; distribution of the non-double couple parameter of Harvard CMT solutions .. 1532
spatial distribution in 1989; Japan, NE, off; Sanriku 1542
suppression; magma, overpressure, role; seismic stress, accommodation; worldwide examples 1543
depth distribution of deep ones; relationship with deviatoric stress 1562
19 Nov 1906; Indian Ocean; Australia, felt in 2157
aftershock source characteristics; Japan: Sea of, 1983 2162
lithospheric stress; seismological constraints 2176
micro-; seismicity; estimating hypocentral uncertainties; generalized inverse and grid search methods compared 2180
Torishima 1984; Japan; tsunamis, abnormal 2445
1989; South Pacific; Macquarie Ridge; seismic waves, long-period, radiation; mantle, evidence for coseismic slip? 2637
California; Loma Prieta, 1989; collection 2644
hypocenters, velocity structures; Indian Plate, geometry; Pakistan, Hazara Arc, beneath 2651
estimating probability of recurrence times; Mediterranean area; Hellenic Arc, WNW 3116
regularity, severity; Pacific, Rim; seismic gaps, hypothesis, ten years later 3118
Ryukyu-Kyushu Arc; North Pacific, NW; plate boundaries, thermomechanical state; arc tectonics 3119
recurrent; faulting, strike-slip cycles; crust, stress state 3120
modelling the source; seismicity; selected papers 3125
Mexico; subduction zones; plate motions; tectonics, implications 3126

East African Coastal Current
Indian Ocean, W; current transport, and structure 2906

East African Rift
System; Kenya, Samburu Hills; basalts, chemistry, secular variations; volcanism; asthenosphere, upwelling 391
System, Nyiragongo/Nyamuragira; Hawaii; Iceland; Antarctica, Mt. Erebus; hotspot volcanism; mantle plumes, deep; great circle distribution 2159
System; seismicity, recent, implications; continental rifts .. 2163
beneath; Kenya; crust; mantle, upper; seismic imaging 2643
System; Kenya; lithosphere, structure, large-scale variation; continental rifts 2647
System; Africa, East; continental rifts; crust, beneath; asthenosphere, intrusions 2888
System, Afro-Arabian Rift; Dead Sea Rift; Aden; Gulf of; Red Sea Rift; continental rifts; overview 3086
Japan; rifting, active mechanism; continents, breakup; backarc spreading 3097

East China Sea
NE; tidal currents, M_2; 3-D model 46
storm surges; tides; interaction; in Chinese, English abstract . 52
Kuroshio, NE of Taiwan; chemical hydrography; variability in the frontal region 777
circulation; numerical study 1126
volume transport; straits, through 2418
Kuroshio; alkalinity, surface distribution; water masses, tracing, applications to 2564

East Pacific Rise
13°N; hydrothermal vents, fields; particulates, settling; sediment trap measurements 213
spreading centers, overlapping; temporal evolution 358
hydrothermal vents, distribution; mid-ocean ridges; tectonics, and magmatism, relation to 1410
beneath; mantle, upper, seismic reflections 1512
Foraminifera; Abyssotherma, pacifica, structure and biology 1688
suspended matter, in bottom waters; metals; hydrothermal vents, high-temperature 2076
9-10°N; magmatism, active eruption; mid-ocean ridges ... 2633
near 13°N; crust, resistivity structure 2642
13°N; bacteria, hydrothermal vent S-reducing; fatty acids, composition 2726

East River
effect of; Long Island Sound; barotropic flow, on 23

East Shetland Platform
North Sea; shelf sediments; distribution of granite and possible Devonian sediments 284

easterlies (More at WIND(S) ...)

Ebro Delta
Mediterranean Sea; littoral zone, morphological elements; in Spanish, English abstract 244
Els Elfacs; Mediterranean Sea; benthic infauna, distribution 1643

Echinodermata
associates of; Crustacea, chirostylid, galatheid; Coelenterata, associates of; submersible collections 519
Israel, Haifa Bay; trace elements, distribution; baseline 1037
Scleractinia; Acanthaster, planci, outbreaks; are they novel events?; coral communities; predation, massive 2241
deposit feeders; Holothuria, tubulosa; sediment communities; microbiota; relationship 2702
deposit feeders; Holothuria, tubulosa; fecal pellets, decomposition; sediment communities 2703
Asteroidea, 17 spp.; Mozambique, Inhaca Island; systematics, zoogeography 3182

Echinoidea
North Atlantic, and elsewhere; Diadema, antillarum; mass mortalities; report 618
pollution bioassays; urchins, sea urchin eggs; enhancing sensitivity 2323

echo sounder data
signal processing, postprocessing system; acoustics 91

echo sounders
quantitative, design of; acoustics, scattering 92
Parasound; South Atlantic, equatorial; sediments, physical properties; comparison of analog and digital records 1404

echo spectroscopy
sonar, parametric; sediments; acoustics 1870

eclogites
formations; crust, roots, dynamics; continental collisions, zones 2639

ecological data
measurements; sampling, choice of sample size 2664

ecological experiments
logic; macroalgae, distribution, as case history 2831

ecological modelling
ecohydrodynamic; hierarchy, and scases 2666
using an object-oriented programming language 2876

ecological networks
spatiotemporal patterns, quantifying functional changes 3145

ecological theory
and research; land; seas; time to cross the boundary 3225

ecology (See also altruism, biogeography, biological-, colonization, competition, environment, HABITATS, niches, refuges, symbiosis; more at BIOLOGY ...)
studies; species sequencing, method 484
trophic dynamics 574
comparative; Swartkops Estuary; Ems Estuary; Chesapeake Bay; Baltic Sea; Peruvian Upwelling; Benguela Upwelling; ecosystems marine 918
aquatic macrophytes; nature of scale and use of hierarchy theory 1020
contemporary, implications for; paleoecology; fossil record 2341

ecology: benthic
North America; Arctic Ocean, shelf; shelf communities; invertebrates, benthic 2242
Canada; shelf communities; symposium review 2250

ecology: community
history of science; the past century, perspective 1103

ecology: feeding
Copepoda, co-occurring, do they compete?; zooplankton .. 2231
North Atlantic, W; fish, temperate and tropical deep-sea ... 2235

ecology: microbial
mathematical aspects, conference papers 2737

ecology: ocean
fisheries, harvesting by, impact; editorial 599

ecometric analysis
coastal zone, the importance of inherent properties; environmental impact, quantifying 1729

economics
theory; fisheries resources, common-property; reprinted classic of theoretical biology 597

economy: sustainable
industrial greening; making the transition 1087
ecosystem heterotrophy
California, Tomales Bay; land-sea interface; metabolism; C-N-P stoichiometry 1333
ecosystems (More at MICROECOSYSTEMS ...)
Antarctic Peninsula; plankton; krill; Project RACER overview 1576
system-level indicators of dynamics; productivity; biomass; body-size spectra 2199
environment; global commons, and international (dis)agreements; anthropocentric or ecocentric? 3253
ecosystems: aquatic
Finland; mercury, concentrations; pollution, 20 years after abatement of source 2326
fate in; bacteria, autochthonous and fecal 2770
ecosystems: experimental
manual 1575
ecosystems: mangrove
from; organic matter, dissolved, export; evidence 1970
ecosystems marine
Swartkops Estuary; Ems Estuary; Chesapeake Bay; Baltic Sea; Peruvian Upwelling; Benguela Upwelling; ecology, comparative 918
ecosystems: pelagic
Black Sea; zonation, vertical 1619
ecosystems: reef
Hawaii; student research, projects; 12 papers 1047
ecosystems: shelf
trophic dynamics, and structure; model studies 1578
Canada, W; British Columbia; benthic biology 2240
ecosystems: stratified
shallow; Mediterranean Sea, Iroise Sea; nutrients; productivity 436
ecosystems: terrestrial
nitrogen limitation; seawater, ecosystems 1976
ecosystems: upwelling
Benguela Current, N; Euphausiacea; Nematoscelis, and Euphausia; diet, feeding, vertical space partitioning 1000
ectocrines (More at ORGANIC COMPOUNDS ...)
ectosymbionts: chemoautotrophic
Nematoda; sulfides, gradient, novel strategy 2712
eddies (More at CURRENTS ...)
scales, resolution of; circulation, gyre-driven; baroclinic instability 8
Mexico; Gulf of, W slope; rings, warm-core; interactions .. 22
acoustics, fields; lenses, intrathermocline; interactions, effects 96
nonlinear, propagation; flow, influence of a lower layer 106
fluid dynamics; lenses, density 117
North Pacific, XCP section across 25°N; currents 660
Atlantic, tropical, 1984-1990; long waves 696
Lagrangian observations; North Atlantic, E; observations of 2 counterrotating eddies 721
coastally-trapped; California, Catalina, July 1987; circulation, mesoscale response to synoptic forcing 743
coastal, response to; California Current; Copepoda; Metridia, pacifica; population dynamics, genetic response 1003
current drifters; SOFAR float developments, applications ... 1061
field of flow; North Atlantic, NE, East Thulean Rise; buoys, drogued, drift pattern 1160
subsurface; Bengal; Bay of, NW 1795
structural characteristics; Avachinskiy Bay; U.S.S.R.nE, off 52°N 1796
mesoscale structure dynamics; flow, field, in 1895
flux parameterizations and variability of boundary conditions; atmospheric boundary layer, marine 1916
residual dynamics; straits, wide, coastal; tidal stress, Lagrangian 2941
deep-reaching, anticyclonic; South Atlantic, E; subtropical gyres 659
eddy diffusion
phytoplankton; nutrients; estimating coefficients 451
eddy diffusivity
California, off; Santa Monica Basin; current shear, and strain; CTD profile results 1228
horizontal; fractal analysis, dimension of drifter trajectories . 1250
eddy entrainment
current jets, by 724
eddy flux
skew eddy fluxes; Georges Bank; North Atlantic; tidal currents, interactions 1804
eddy pumping
role of; primary production 437
eddy transport
and advection; circulation; currents; observing with floats .. 636
eddy viscosity
waves, random, dissipation; drag-law models 2446
edge waves
LF, relation to; barrier bars; shoreline dynamics, multiple-bar 247
nonlinear action in a triad 1828
Stokes-mode; shoreline profile 2917
education
statistical analysis; sampling, resampling; attempts to reform the introductory college course; report 1111
science teaching; a holistic approach 1744
eelgrass (More at FLORA ...)
eelgrass beds
canopy as refuge; Bivalvia; Argopecten, irradians, as prey; predators, benthic, from 981
eels
spawning areas; Sargasso Sea; North Pacific, subtropical; Anguilla, rostrata, A. japonica; expedition reports 2385
effluent (More at WASTE ...)
effluents: drilling
contamination by; Arctic area; sediments; trace metals, persistence 1092
effluents: industrial
Wales; sediments; PCBs 2586
Egypt
coast, off; Mediterranean Sea; waves, characteristics 59
Nile Delta; delta sediments; facies analysis 823
Nile Delta, Rosetta-Nile Promontory; shoreline dynamics; satellite monitoring of shoreline changes 1366
Holocene; Nile Delta; Mollusca, faunas, paleobathymetry; delta sediments 1443
Nile Delta; sediment transport; nearshore patterns 2020
Neogene, -Quaternary; Nile Delta, Ras El-Barr well; clay minerals; shales, thermal maturity 3050
Eilat: Gulf of (Use Elat: Gulf of)
Ekman boundary layer
theory of; fluid dynamics; nonlinear boundary conditions ... 1892
Ekman dissipation
and sloping boundaries; fluid dynamics; baroclinic instability, linear 2945
Ekman pumping
velocity; Indian Ocean, N; mixed layer, depth; monsoons, SW, during 1280
El Niño
ENSO events; Southern Oscillation; sea level pressure; Darwin-Tahiti SOI data back to 1876, comparison with recent ENSO events 137
1983; air-sea interface; heat exchange, analysis of 146
China; typhoons, days between first and last landings; annual variation characteristics; in Chinese, English abstract 157
occurrences; atmospheric aerosols, radioactive; seasonal maxima in concentration 163
1982-83; Millepora, spp., elimination of; corals, reef-building 432
Australia, SE, waters around; Southern Oscillation; ENSO episodes characterized 744
ENSO cycle; ocean-atmosphere interactions; circulation, ocean and air; weather 1918
recent, strong; California; Gulf of; temperature, variability; sediment diatom record 2512
ENSO events; Strongylocentrotus, franciscanus; kelp communities, long-term stability; sea urchins; relationships . 2714
1986-87; South China Sea, N, during; climate, anomalies; in In Chinese, English abstract 2946
1986-87 ENSO; surface temperature, response; ocean-atmosphere interactions 2956
Pacific, E, tropical perturbations; air-sea interactions; precipitation, field over NW Mexico; relationships 2959
Southern Oscillation; atmospheric pressure, systems; influence on the subtropical high 2961
Elat: Gulf of (See also Aqaba: Gulf of)
Red Sea; Foraminifera, tiny, shallow-water; taxonomic notes 527
electric cables (More at CABLES ...)
electrical conductivity
seafloor; lithosphere, thermal structure investigations; ML soundings; in French, English abstract 346
Ryukyu Arc, and Trench, beneath; seafloor; subduction, relation to; crust 1552

electrical field
Schumann resonances; abyssal ocean 82
DC-sounding data interpretations; Barents Sea, shelf 2462
electromagnetic field
induction in the ocean; Eulerian currents; comparison 2461
electron microscopy (More at MICROSCOPY ...)
elements (See also actinides, metals, radionuclides, rare earths ...)
ratios; Mediterranean Sea, SE; nutrients, dissolved, and preformed 209
siderophile; mantle; early differentiation of the earth 414
microdistribution; sediments; multifractal analysis 1386
distribution patterns; seawater 2558
C, N, O, H, P, S; particulates; workshop report 3011
elements: trace
content; precipitation, analysis 154
Baja California, shelf off; water column, shelf, coastal; natural process contributions vs anthropogenic inputs 224
estuaries, and coastal waters; U.S. report to IUGG 778
distribution; Israel, Haifa Bay; Echinodermata; baseline ... 1037
San Francisco Bay; California; organochlorines; content in surf scooters, 1985 1042
distribution; Mexico, Navachiste Lagoon; Bivalvia; baseline 1043
scavenging; colloids, surface chemistry 3006
anoxic water; filtration, techniques for river, coastal waters . 3023
flux modification; Mid-Atlantic Ridge; hydrothermal scavenging 3061
embayments: coastal
Spain, Galicia, the Corrubedo beach-lagoon complex; shoreline dynamics; sediments 262
low-energy; sedimentation 1369
California, central coast; Brachyura, larvae; seasonal occurrence, abundance 2810
Emerald Basin
Canada, Scotian shelf; shelf sediments; deposition and diagenetic alteration 2031
emersion
effects; photosynthesis, seasonal patterns; seaweeds, littoral; physiology 2305
Emiliania
huxleyi, genotypic variation; Coccolithophoridae 2835
employees: government
U.S.; professional associations; current ethics proposals harmful to scientists 1105
Ems Estuary
Swartkops Estuary; Chesapeake Bay; Baltic Sea; Peruvian Upwelling; Benguela Upwelling; ecosystems marine; ecology, comparative 918
endangered species
sea turtles, Kemp's ridley, evolutionary distinctiveness 956
and rare; Canada; fish; mammals, marine; status reports .. 1733
Hawaiikure Island; seals, monk; new protection program .. 2890
endolithic fauna
Argentina, Santa Elena shoal; intertidal zone; substrates, characteristics, relationship to 2704
energetics: trophic
predator-prey dynamics; corals, *Pocillopora johnstonianus*; fish, coral-feeding, damselfish 919
energy (For man-made systems see also POWER ...)
energy: atmospheric
hydrologic cycle 2967
energy balance: global
paleoclimate, implications for; influence of various forcing variables 2950
energy: kinetic
equipartition; plate tectonics 2137
energy: turbulence
models; viscosity, spectral, models; fluid dynamics 2486
energy: wave
spectral refraction and refraction-diffraction models compared . 60
engineering
breakwaters, design; design, structural strength considerations; overview of recent research; 9 papers 584
Webb: Douglas Chester; biographical sketch 1109
concerns; Canada; Arctic area; shelf exploration; oil ... 2354
engineering: ocean
instrumentation; offshore technology; overview articles; 11 papers 1077
England
Southampton Water; Foraminiferida, benthic; pollution indicators 2334
English Channel
North Sea; atmospheric aerosols; particles, chemistry, source 773
Engraulis
encrasicolus, eggs and larvae; Mediterrean Sea, W, vertical distribution in 2700
Eniwetok Atoll
carbonate sediments, shallow-water; strontium, isotopic variation; stratigraphic, chronostratigraphic, eustatic implications 841
Pliocene; Pacific, tropical; sea level, change 2102
Pacific, W; Foraminifera, planktic; calcareous nannofossils 2591
Neogene; Pacific, equatorial; biostratigraphy, and paleoenvironments 2607
Pacific, W tropical; Foraminifera, biostratigraphy; sediments, borehole 2614
enteroviruses (More at viruses ...)
entrainment: eddy
current jets, by 724
envenomations: marine
medicine, treatment of victims; toxicities; treatments for bites, stings, poisoning by consumption, electric shocking 1082
environment (More at ECOLOGY ...)
physical structure, optics; productivity, controls on; phytoplankton 947
natural, shrinking; extinction, current prophecies; biodiversity, declining; uncertainties, the scientific debate; report . 1118
aquaculture; interactions 1712
ecosystems; global commons, and international (dis)agreements; anthropocentric or ecocentric? 3253
environmental assessment
U.K., Severn Estuary; pollutant discharges 590
seismic profiling, marine; discussion 2347
environmental impact
predictions; Australia; accuracy, quantification analysis ... 1084
quantifying; coastal zone, the importance of inherent properties; ecometric analysis 1729
assessment; Long Island Sound; water quality 1731
environmental impact assessment (See also impact assessment ...)
environmental management
Arabian Gulf, past, present and future states; war, aftermath, impacts 593
needed; Mediterranean area; proposal for a multinational Mediterranean Authority 1102
U.S., S, Florida and Georgia; Trichechus, manatus; habitats, managing; geographic information systems, workshop; manatees 1630
and protection; scientifically-based strategies 2365
Jamaica; wetlands; development and degradation, redevelopment and preservation 3251
environmental monitoring
analytical chemistry; review 170
Hong Kong; coal ash lagoons; an 'oyster watch' monitor .. 1028
North Sea Task Force; the first two years 1074
Australia, NW, off; oil fields, offshore 1734
bacteria, identification; reverse sample genome probing 2263
Arctic area, environments; remote sensing; polar seas; resource management; symposium papers 3227
environmental politics
Japan 1738
environmental pollution
mercury; conference papers 2359
environmental protection
Australia; offshore petroleum, industry 1732
marine; developing nations; what cost? 2879
environmental research
statistical design, framework for enhancing 1051
environmental science
statistical analysis, methods; conference; 20 papers 1052
mathematical modelling, role; an idiosyncratic assessment . 2345
environments: aquatic
viruses, production and decay 489
environments: continental
Quaternary; Africa, NW and E margins; margin sediments, recorded by 311
Cretaceous; Tertiary; Africa, off; basin sediments 319
environments: depositional
Mediterranean Sea, Gulf of Lion and Ebro continental margins; submarine valleys 242

Arabian Sea, SE; sediments, $CaCO_3$, organic C, and sulfide S variations ... 1402
Barents Sea, N, outside Nordaustlandet; tidewater glaciers, sub-polar; sediments ... 2038
environments: mangrove
bacteria, purple photosynthetic ... 1666
environments: paralic
Foraminifera, benthic, as indicators of gradient of marine influence ... 523
environments: sedimentary
change in; Cenomanian-Turonian boundary; carbonate platforms, rudist-bearing, demise ... 1376
modern; Massachusetts; Boston Harbor ... 2023
environments: upwelling
Southern California Bight, San Pedro Basin; Foraminifera, planktonic; seasonal C and O isotopic variability ... 1017
environmetrics
quantitative analysis, techniques for studying the environment; modelling, valuing, estimating, predicting, decision-making support systems; special issue ... 2343
enzymes
extracellular; microbial metabolites; temperature, effects; polar seas, in ... 2779
Eocene
Oligocene; Southern Ocean, Atlantic sector; paleoceanography; ODP sites 689B and 690B ... 2087
Late; Oligocene; Canada, E; Newfoundland, NE shelf; Foraminifera, assemblages; paleoecology ... 2111
Mid-, to Lower Miocene; South Atlantic, subantarctic; calcareous nannofossils; magnetobiochronology ... 2620
South Pacific, W, and Nazca Plate; propagating rifts; tectonics ... 2625
eolian dust (More at DUST ...)
Mediterranean Sea, basin; atmospheric transport; dust intrusion events ... 769
Sahara Desert, as origin; Atlantic, trans-; observations, analysis of a Saharan dust outbreak ... 771
Pacific, N and equatorial; sediments, pelagic; geochemistry, paleoclimate implications ... 828
epeiric seas
and oceans; Jurassic, Late; Cretaceous, Early; fossil record; nannoconids as paramount environmental recorders; in French, English abstract ... 1445
epeirogeny
sea level, short-lived global fluctuations; plate tectonics; relationships ... 1422
epibenthic communities
Mediterranean Sea, W; utilizing Spot satellite imagery; in French, English abstract ... 3169
epibenthos (More at BENTHOS ...)
epicontinental seas
Pacific, W; Indian Ocean, N; Coccolithophoridae; Recent monsoonal and fertility controls on coccolith assemblages ... 540
epifauna (More at FAUNA ...)
North Sea, central; infauna ... 467
large, disturbance by; Harpacticoida, sediment-dwelling, impact on; seagrass communities; predator-prey dynamics ... 985
developing assemblages; Scotland, St. Andrews coast; Gibbula, cineraria; Nucella, lapillus; Asterias, rubens; grazers, effects of; recruitment, of epifaunal invertebrates 3172
Epimeria
n.sp.; Weddell Sea; Amphipoda, paramphithoid ... 510
epiphytes
levels; Thalassia, testudinum; seagrass biomass, and productivity; nutrients, water column; relationships; field observations ... 1691
epiphytic hydrozoa
distributions; Mediterranean Sea, NW; Halimeda, tuna, growing on ... 1642
epontic algae
Weddell Sea; photosynthesis, -irradiance relationships; carbon, metabolism ... 2680
epontic communities
structure; Antarctica, waters around; sea ice; productivity 2214
Equator
diffusive interleaving, double ... 112
equatorial circulation
geostrophic flow ... 1776
tropical; North Atlantic, near-surface ... 1783
equatorial currents
SSEC; South Atlantic; geostrophic transport ... 32
zonal geostrophic; dynamic topography ... 1770
Atlantic; Pacific; wind, as forcing agent; contrast in seasonal cycles ... 1808
equatorial flow
South Pacific; water masses, Antarctic Intermediate Water path ... 677
equatorial undercurrents
boundary currents, western; relationship ... 1807
equatorial upwelling (More at UPWELLING ...)
equatorial waves (More at WAVES ...)
numerical dispersion relation ... 1189
equatorial westerlies (More at WESTERLIES ...)
equatorial zone
oceans, over; geoid subsidence, postglacial; new spectral formalisms ... 2623
erosion (See also bioerosion, slumping, weathering ...)
mapping; U.S.; shoreline dynamics; coasts, historical changes; CZM ... 251
sediments; deposition; measurement sensor ... 269
of slopes, and correlated deposits; Mediterranean Sea, Gulf of Lions; margin sediments; slumping, scars; geotechnical characterization ... 822
Cenozoic; Barents Sea, W; sedimentation ... 3076
erosion: coastal
problems; Europe, 11 countries; littoral zone, database ... 258
erosion: estuarine
Maryland, eastern shore; streams, inversion, piracy ... 263
erosion policy
national, needed; South Carolina, Folly Beach; coastal development; hurricanes, Hugo 1989; CZM, failings . 2875
erosion terraces
Mexico: Gulf of; Florida Escarpment ... 1406
error
potentially serious source of; intestinal tracts, sediment in; biomonitoring, programs ... 2325
eruptions: basaltic
Iceland, present-day; redox conditions evaluated ... 872
eruptions: volcanic
submarine; pyroclastic debris, fallout; sediments, volcanic deposits ... 376
ejecta and eruption mechanisms; Japan; Izu Peninsula, off, 1989; seamounts, submarine volcanism ... 396
Krakatau, 1883 ... 1504
Iceland, Lakagigar, 1783; carbon dioxide, and sulfur degassing; lava, largest flow on earth ... 3105
escarpments
wedge-shaped, over; coastal currents, evolution ... 124
Escherichia
coli; antibiotics, resistance to ... 2837
estuaries (More at COASTS ...)
diked; New England; oxygen, summer depletion ... 203
coastal plain; U.S., E coast; fluvial sediments ... 273
South Carolina, Bly Creek system; marshes; detritus, and nutrients, annual material processing ... 482
hydrographic modelling; oceans; an equation of state for numerical models ... 621
and coastal waters; trace elements; U.S. report to IUGG ... 778
U.K.; convergent fronts; pollution, implications for ... 1725
and shallow seas; nutrients, concentrations; alkalinity; colloids, and HMW dissolved material, contributions ... 1974
retention in; Copepoda; Eurytemora, affinis ... 2281
nutrients; chlorophyll; watershed discharges, variations, effects ... 2377
Periyar River; India; nutrients, distribution ... 2569
to; Long Island Sound; nutrients, export; watersheds, from ... 2570
microbial food webs; synergism between research and models 2723
in; particulates, analysis, characterization ... 3024
microtidal, postglacial evolution; Wales, Dyfi Estuary; sediments ... 3046
development; Holocene; China; Yangtze River; Yellow River ... 3068
estuaries: eutrophic
Australia, Peel-Harvey Estuary; macroalgae, changes in biomass, species composition ... 533
Baltic Sea, S; bacteria, annual changes ... 2739
tideless; Baltic Sea; microbial food webs ... 2767
Baltic Sea; microbial food webs ... 3178
estuarine biology
symposium ... 1648

estuarine channels
Argentina; Bahia Blanca, El Toro Channel, geomorphological evolution; shoreline dynamics 256
estuarine chemistry
dimethylsulfide, and DMSP; decomposition, dependence on temperature, concentration 2259
estuarine circulation (More at CIRCULATION ...)
responses; China; Pearl River, Delta; sea level; meteorological forcing and river inflow 1371
South Africa, Palmiet; tides, dynamics 1778
estuarine communities
Bivalvia; Mytilus, edulis, variations in age-class densities; population dynamics 978
estuarine erosion
Maryland, eastern shore; streams, inversion, piracy 263
estuarine flushing
and residence times; Florida; Charlotte Harbor 643
estuarine hydrodynamics
diffusion; numerical experiments; in In Korean, English abstract 2479
estuarine macrobenthos
organic matter, enrichment, effects 1638
estuarine nutrients
influence on; Wadden Sea, and Scheldt Estuary; Netherlands; intertidal mussel beds 483
estuarine sediments
denitrification, temporal variability 494
tin, butyltins 2 years after TBT use restricted 811
chitin mineralization; chitosan, pathway, importance of ... 1667
estuarine waterways
projects; navigation, channels, maintenance; CZM 583
ethics (More at ACADEMICS ...)
Ethiopia
Afar; tectonics, block rotation; continental lithosphere, extension; comparison to oceanic microplate systems 348
Eucalanus
californicus, jet role in aspects of secondary production; California, off Point Arena; Copepoda; current jets .. 1011
eukaryotic cells
RNA synthesis inhibition; toxicity testing; highly sensitive water assay; in French, English abstract 547
Eulerian currents
electromagnetic field, induction in the ocean; comparison .. 2461
Eulerian streaming (More at FLUID DYNAMICS ...)
Euphausia
lucens, as predator; Copepoda, as prey; carnivory, selective; zooplankton 1005
superba; Antarctic Peninsula; Bransfield Strait, region; krill, distribution and population structures of immature and adult krill 1673
crystallorophias; Antarctic Peninsula; Bransfield Strait, region; krill, development rates and habitat shifts 1674
superba; Thysanoessa, macrura; krill, Antarctic, morphological and biochemical differentiation; multivariate approach 1675
superba; Antarctic Peninsula; Bransfield Strait, region; krill, growth and early development, mesoscale variation .. 1678
superba; Antarctic Peninsula; Bransfield Strait, and Gerlache Strait; Drake Passage; krill; depth relationships of eggs, larvae and adults 1684
superba; Antarctica; Prydz Bay, in summer; krill, post-larval, distribution and abundance 2219
Euphausiacea
larval abundance, distribution; Antarctica; Prydz Bay 511
Benguela Current, N; Nematoscelis, and Euphausia; upwelling ecosystems; diet, feeding, vertical space partitioning 1000
Antarctica, waters around; krill larvae, distribution 1683
spp., distribution; North Atlantic, warm waters 2808
larval, distribution; India, SW, off 2817
Eupolymnia
nebulosa; Bivalvia, utilization by; Abra, alba; Polychaeta, utilization by; fumigated sediments 973
Eurasia
Aral Sea, drastically reduced water levels due to heavy demands on tributaries; irrigation; history, consequences 1101
Europe
NW; shelf seas; temperature, surface and bottom 4
NW; shelf seas; stratification 10
shoreline dynamics; coasts, morphogenetic zones and transitions; coastal processes 248
11 countries; coastal erosion, problems; littoral zone, database 258
U.K., France; Tertiary, uplift; shelf sediments; chalk, porosity 283
NW; shelf seas; thermocline, depths; temperature 624
developments 1978-88; satellite radiometry, microwave 1064
tidal gravity; tides, ocean, loading by 1819
coastal zone; atmosphere; trace gases; CO_2, CH_4, COS 1940
N, postglacial rebound; crustal uplift 2117
beneath; Mediterranean Sea, beneath; Asia Minor, beneath; seismic tomography, delay-time; mantle, upper 2174
systems; meteorological satellites 2493
pollution monitoring; biomonitoring; water quality, issues; report of the ICES Advisory Committee 2868
NW, Armorican Shelf; nutrients; phytoplankton; spring evolution; in French, English abstract 3157
NW; shelf circulation; tides; EUROSPILL databases 3242
European Aquatic Sciences Libraries and Information Centres
association of; U.S.S.R.; VNIRO, All-Union Research Institute of Marine Fisheries and Oceanography; participation in EURASLIC; French and English 580
as regional section; International Association of Marine Science Libraries and Information Centers; international organizations; 13 papers; French and English . 581
European Economic Community (Use E.E.C.)
europium
anomaly; seawater; implications for fluvial vs hydrothermal inputs 2559
Eurytemora
affinis; Calanoida, in heterogeneous environment; Acartia, tonsa; competition; coexistence, predator-mediated ... 2280
affinis; Copepoda; estuaries, retention in 2281
eustasy (More at SEA LEVEL ...)
changes due to; sea level; crust, stable frame of reference selection 2610
eutrophic estuaries
Australia, Peel-Harvey Estuary; macroalgae, changes in biomass, species composition 533
Baltic Sea, S; bacteria, annual changes 2739
tideless; Baltic Sea; microbial food webs 2767
Baltic Sea; microbial food webs 3178
eutrophication (More at TROPHIC DYNAMICS ...)
gradients; anaerobic respiration; carbon sedimentation; seasonal patterns 475
Baltic Sea; Finland: Gulf of; pollution 1728
Wadden Sea, Dutch; benthic fauna, changes 2707
Baltic Sea; Kiel Bight; sediment denitrification 2741
effects; bacteria, heterotrophic, distribution; environmental factors 2772
long-term effects; Adriatic Sea, N; macrofaunal communities 2840
Chesapeake Bay; anoxia; a 2000-yr history 2884
Germany; Darss-Zingst Bodden, chain; water quality, possible restoration measures 3040
Wadden Sea, ecological state; nutrients, load and trend 3147
Baltic Sea; pollution; benthic communities, impacts on .. 3148
process; Baltic Sea; Protozoa, planktonic, importance to ... 3150
different stages; zooplankton biomass; seasonal variations .. 3155
influence; Pacific, W; bacteria; fjords, in 3176
consequences; Baltic Sea; benthic communities, zoo- 3203
influences; Baltic Sea; benthic communities; algae 3209
microbial food webs, sensitivity; pollutants, enrichment .. 3222
Baltic Sea; current trends in hydrographic and chemical parameters 3249
evaluation research (More at RESOURCE MANAGEMENT ...)
evaporation
coastal fogs; bogs, blanket 2538
evaporite sediments
formation; Messinian, refill channel; Mediterranean Sea; Valencia Trough, gorge 2018
age, origin; Messinian; Mediterranean Sea; Sr isotope studies 3074
evolution (See also selection, origin of life and speciation; more at BIOLOGY ...)
mutation; organisms, can they direct their evolution 573
why macroscopic animals appeared so late; Proterozoic, end; fossil record 1713
of size; fossil record, mammal size gradients; paleoclimate; calibrating the paleothermometer 2106

Darwinian; feedback theory 2339
evolution: parallel
Foraminifera, planktonic, keel structure 2299
Exclusive Economic Zone (Use EEZ)
excursion tables (More at DIVING ...)
Exmouth Plateau
Australia, off; continent-ocean boundaries; transform margins; tectonics, development 863
Australia, NW, off; lithospheric heat flow; numerical model 1476
Indian Ocean, deep basins; crust, structure 2168
exotic species
U.S., Atlantic coast, first discovery 1988; Decapoda, grapsid; Hemigrapsus, sanguineus, a W Pacific crab 1009
invasions; designer fish, test-tube; genetic engineering; cautions required 2367
expanding Earth theory (More at TECTONICS, EARTH...)
expendable instrumentation
temperature, and depth corrections 3228
experimental data
spikes in; signal processing, hydrooptical investigations; algorithm for spike rejection 1216
experimental ecosystems
manual 1575
experiments: ecological
logic; macroalgae, distribution, as case history 2831
exploited populations
marine, dynamics; recruitment, variability 1098
exploration (More at prospecting ...)
exploration: geophysical
crust; seismic anisotropy, advances in research 3114
exploration: petroleum
Caribbean area; hydrocarbons, geologic rationale 910
Global Positioning System, potential uses 1566
exploration: shelf
Canada; Arctic area; engineering, concerns; oil 2354
exploration: underwater
remote sensing, high-resolution, optical and acoustic; instrumentation, imaging systems reviewed 1062
explosions (More at SOUND ...)
explosive volcanism
Alaska, Aleutian Range, Katmai; drilling project investigations, collection 1497
extensional tectonics
Neogene; Greece, Megara Basin; sedimentary basins; tectono-sedimentary development 1418
mechanism; crust, structure; gravity field, anomalies, constraints from 2122
extinction (See also catastrophism, EVOLUTION ...)
a kill curve for marine species; Phanerozoic; fossil record .. 849
current prophecies; biodiversity, declining; environment, natural, shrinking; uncertainties, the scientific debate; report 1118
biodiversity, studies; science; policy 1121
selective, and survival; Cretaceous-Tertiary boundary, across; North Atlantic, Coastal Plain; fossil record ... 1448
invertebrates, marine families; speciation; probabilities of origination, persistence, extinction 2338
extinction: mass
benthic; Paleocene, end; deep-sea warming, abrupt; paleocirculation, changes 1433
productivity, primary; selection, ecological selectivity 1453
extraterrestrial impacts
'winter'; Cretaceous-Tertiary boundary; paleobotanical evidence 323
extreme waves
statistics, using hindcasts 70
and tides, etc.; climatology, use of extreme value statistics ... 1252
Exxon Valdez
spill; Prince William Sound; microbial populations; hydrocarbon biodegradation, potentials; sediments, shoreline, fertilized 1705
Alaska; Prince William Sound; oil spills; bioremediation, efforts, results of 1726
Alaska; Prince William Sound; oil spills; bioremediation, and other strategies; situation update 1727
Alaska; Prince William Sound; bioremediation, effects; mutagenicity, on; oil spills 2356
eyes: compound
structure; Stomatopoda, mantis shrimp; light, polarized, detection 2815
structure; Stomatopoda, mantis shrimp; pigments, color; vision, polychromatic 2816
facies: sediment
ichnofabric indices, and basin analysis 1444
ichnofabric indices; symposium papers 1446
associated; Antarctica; sea ice 2045
fallout (More at nuclear waste, RADIOACTIVE MATERIALS ...)
fallout: Chernobyl
Sellafield, discharges; cesium, -137; dispersion, marine ... 1961
False Bay
environmental assessment 20 years later; South Africa; symposium 3230
fan sediments
Weddell Sea, margin; Crary Fan 246
Mississippi Delta, and fan; sequence stratigraphy; discussion 845
fans: alluvial
submarine; coralliths, growth 243
Faroe-Shetland Channel
U.K., NW; basin sedimentation, glacially-influenced 2070
fast ice (More at ICE ...)
fatty acids
composition; East Pacific Rise, 13°N; bacteria, hydrothermal vent S-reducing 2726
fault zones
Neogene, development of the restraining-bend complex; Caribbean Sea, Swan Islands; tectonics 840
neotectonics; crust; special issue 2124
Trans-Haitian; Tertiary; Caribbean Sea; Hispaniola; neotectonics; tectonics 2128
strike-slip; Solomon Islands; Pacific; seabed minerals, potential, effects on 3131
faulting
California, southern; crust, kinematics; seismicity 400
transcurrent; Mediterranean Sea, E, margins; crust, structure variations 3112
strike-slip cycles; earthquakes, recurrent; crust, stress state .. 3120
faulting: transcurrent
tectonics, strike-slip; workshop papers 1487
faults
interactions with; Middle America Trench; seismicity, synthetic model; tectonics 3130
faults: transform
Caribbean Sea; Cayman Trough, SeaMARC II mapping .. 357
Atlantic, equatorial; Romanche Fracture Zone; bathymetry 891
zone migration; propagating ridges, at; implications of bookshelf faulting 2138
weak, along; crustal deformation, and stress 2184
fauna (See also crypto-, epi-, in-, macro-, meio- and microfauna; deposit feeders, invertebrates, tube dwellers; more at ORGANISMS ...)
Hong Kong; sandy beaches, wave-exposed 986
fauna: benthic
mixing by; sediments, upper layers; bioturbation 468
subtidal communities, rocky; predator-prey interactions 472
Sweden, Gullmarfjord; Crustacea, hyperbenthic 506
organic chemicals; effects of linear alkylbenzene sulphonate . 556
Mollusca; Foraminifera; , benthic fauna; rates of movement and sedimentary traces (laboratory studies) 1018
rocky shores; humans, trampling effects 2342
changes; Wadden Sea, Dutch; eutrophication 2707
Southern Ocean; King George Island; Amphipoda, emphasized; in German, English abstract 3170
fauna: endolithic
Argentina, Santa Elena shoal; intertidal zone; substrates, characteristics, relationship to 2704
fauna: fjord
rock wall; Newfoundland, Bay d'Espoir 2246
fauna: interstitial
Tenerife, and Hierro; Amphipoda; Ingolfiellidea, new species 2824
fauna: intertidal
mussel beds; amensalism or amelioration? 464
fauna: macrozooplankton
Newfoundland; comparison in 2 fjords of different physical oceanography 948
fauna: marine
achieving an exhaustive inventory; cryptozoology, role 1641
fauna: parasite
Antarctica; Cetacea, on; use as potential stock indicators ... 1625
fauna: vent
chemical composition 469

Bivalvia: Bathymodiolus, thermophilus; evidence for filter-feeding ... 2788
faunal diversity
fossil record, a model of onshore/offshore change ... 851
faunal recruitment
Copepoda; seagrasses; field test ... 479
feathers
birds, shorebirds; selenium, concentrations, variability and significance ... 2319
fecal pellets
zooplankton; marine snow; metals, scavenging and retention; particulates, by ... 1978
Baltic Sea; Kiel Bight; sedimentation, rate, effects on; food, supply, in relation to ... 2233
decomposition; Echinodermata, deposit feeders; Holothuria, tubulosa; sediment communities ... 2703
egestion; Harpacticoida; organic matter, microbially-synthesized aggregates, ingestion ... 2765
marine snow; particulates; collection, analysis ... 2984
Fedorov structures
coherent; water column, upper; mushroom structures ... 1876
feedback theory
evolution, Darwinian ... 2339
feeding
diversity, implications for; Weddell Sea; invertebrates, C and N isotopic compositions ... 2692
feeding ecology
Copepoda, co-occurring, do they compete?; zooplankton ... 2231
North Atlantic, W; fish, temperate and tropical deep-sea ... 2235
ferromanganese crusts
geochemistry; Japan; Sea of ... 2190
North Atlantic, Krylov Seamount; origin, mineralogy, geochemistry ... 2194
mineralogy; Indian Ocean, central basin; metals, transition, and excess Th-230; implications for paleoceanographic influence on crust genesis ... 2658
Pacific, central; variability, geochemistry ... 2661
REE variability; Pacific, central; rare earths, paleoceanographic implications ... 3140
Co-rich; Pacific, central equatorial; regional and depth variability in composition ... 3141
ferromanganese nodules (More at NODULES ...)
and crusts; Indian Ocean, central; fossils, new ichthyoliths ... 327
Indian Ocean, central; biogenic influences on growth ... 426
composition; productivity, ocean surface; seafloor, oxidation rates; relationships ... 1571
seafloor, distribution on ... 2191
mechanism of formation ... 2192
formation; physicochemical analysis ... 2193
Pacific; Atlantic; Baltic Sea, and the Gulf of Bothnia; Barents Sea; Ce, Nd, Sr isotopic compositions compared ... 3138
ferromanganese oxides
North Fiji Basin; Pacific; hydrothermal deposits ... 3142
fertilization: iron
atmospheric carbon dioxide, possible effects on ... 794
Southern Ocean; global warming; Geritol fix refuted ... 1754
Fieberling Seamount
around; North Pacific, NE; flow, mesoscale; water column, thermohaline structure ... 1134
Fiji
Tonga; New Zealand; Gnathostomulida ... 2270
petroleum geology; basin sediments ... 3134
filaments: current
cold; California, N, off; coastal zone, transition; structure, dynamics ... 667
cold; California, N, off; Point Arena; physical structure June 1987 ... 673
cold, nature of; California Current, system; coastal zone, transition ... 674
subduction; California, N, off; coastal zone, transition area 720
filaments: upwelling
South Atlantic, E; currents ... 679
Filchner-Ronne Ice Shelf
beneath; Weddell Sea, formation of Ice Shelf Water; thermohaline circulation ... 2458
Antarctica; ice shelves, flow; in German, English abstract ... 2922
films (More at SLICKS ...)
presence; internal waves, manifestations; surface, at; surfactants, presence ... 1842
films: organic
monomolecular, effect of; wind waves ... 1188
filtration
ultra-; bacteria; viruses; organic matter, dissolved; particulates ... 2986
bias in; particulates ... 2989
technique; seawater; colloids; metals, associated; particulates ... 3018
techniques for river, coastal waters; anoxic water; trace elements ... 3023
finestructure
velocity; Arctic Ocean; internal waves ... 2451
Finland
aquatic ecosystems; mercury, concentrations; pollution, 20 years after abatement of source ... 2326
Finland: Gulf of
W; nutrients, reserves, long-term changes in; productivity, pelagic, changes in ... 931
Pinnipedia, Baltic seals; present status, future predictions ... 1626
benthic macrofauna; hypoxia; effects of oxygen deficiency 1631
Baltic Sea; eutrophication; pollution ... 1728
Baltic Sea, proper; bacteria, total and saprophytic, distribution ... 2750
fiords (Use fjords)
firn
through; ice sheets; wind pumping; 3-D theory ... 1201
First Dynamic Response and Kinematics Experiment (Use FDRAKE)
First GARP Global Experiment (Use FGGE)
First International BIOMASS Experiment (Use FIBEX)
fish
number density, determinations via statistical analysis; acoustic backscattering ... 88
red mullet; Greece, waters around; organochlorines ... 549
coral-feeding, damselfish; predator-prey dynamics; corals, *Pocillopora johnstonianus*; trophic energetics ... 919
Cyprinodon variegatus; detritus, amorphous; nitrogen, assimilation from; shrimp, *Palaemonetes pugio* ... 959
Mexico, Cozumel; Porifera; coral reefs; hurricanes, Gilbert, effects ... 971
mechanism of transfer to; sediments; seawater; radium, -226 ... 1320
pelagic, implications for; South Africa; Benguela Upwelling, area; chlorophyll, *-a* distribution; phytoplankton, possible effects on; global warming ... 1586
plankton succession; aquaculture, marine basins for larval fish rearing ... 1607
benthopelagic; prey, pelagic ... 1628
benthic; Hawaii, Alenuihaha Channel; benthic megafauna; bathyal zone ... 1633
Canada; mammals, marine; endangered species, and rare; status reports ... 1733
temperate and tropical deep-sea; North Atlantic, W; feeding ecology ... 2235
epibenthic; Decapoda; Zostera, marina, eelgrass beds; Ulva, lactuca, sea lettuce beds; marsh creeks; habitats comparison ... 2252
Micropogonias furnieri; Cuba, Cienfuegos Bay; heavy metals; baseline ... 2320
attraction; artificial reefs, and structures; role of depth and interstice size ... 2368
pollutant monitoring; EROD methodology, measurements ... 2841
Arabian Sea; metals, heavy; cations, major; concentration correlations ... 3217
tin, triphenyltin analysis ... 3218
fish: designer
test-tube; genetic engineering; exotic species, invasions; cautions required ... 2367
fish larvae
growth; North Sea; Clupea, harengus (herring); regional and seasonal differences from otolith analysis ... 962
Antarctic Peninsula; Bransfield Strait; distribution and abundance ... 1599
fish otoliths
tree rings of the deep; report ... 1120
fish recruitment
North Sea; petrochemical plants, around ... 1039
fish schools
formation and maintenance; a random encounter model ... 2204
fish stocks
declines; seabirds; relationships ... 1580
fisheries
harvesting by, impact; ocean ecology; editorial ... 599

fisheries: commercial
Cetacea; gillnets, acoustic reflectivity enhanced to reduce entanglement; target strength measurements, implications for incidental dolphin take 1096
Cetacea; gillnets, modifications to reduce entanglement; merits of acoustic modifications discussed 1097
fisheries management
population dynamics, commercial fisheries; reprinted classic of theoretical biology 600
World Ocean; fishery resources; ownership and productivity issues 1100
common-property; economics, theory; reprinted classic of theoretical biology 597
fisheries: tuna
commercial seiners; Cetacea; porpoises, dolphins, protection; vessel registry, foreign-flag; are regulations increasing foreign-flag registration? 2366
fishery resources
World Ocean; fisheries management; ownership and productivity issues 1100
fishing: commercial
South Atlantic, W, activity in; krill 2873
fishing nets
and traps; International Whaling Commission, workshop results; Cetacea; mortalities, incidental to fishing; report 1099
fission products (More at RADIOACTIVE MATERIALS...)
fjord fauna
rock wall; Newfoundland, Bay d'Espoir 2246
fjord sediments
Norway, Oslofjord; diagenesis, amino acid-, organic C and N mineralization 282
fjords (More at COASTS ...)
seafloor prodeltaic deposits; Alaska; Glacier Bay; sediments, laminated 2065
in; Pacific, W; bacteria; eutrophication, influence 3176
fjords: glacial
Alaska, SE; sedimentation, ice-proximal, rates 2051
Fladen Ground Experiment (Use FLEX)
flagellates
choanoflagellates, abundance and distribution; California, central, waters off 923
grazing by; Baltic Sea; picophytoplankton, seasonal dynamics 938
abundance; natural waters; methods compared 942
bacterivorous; amino acids, DFAA and DCAA release 943
choanoflagellates; California, central coast waters; nannoplankton 953
nanno-, benthic heterotrophic; North Sea; nannoplankton; algal sedimentation, response to 967
free-living; grazing, prey-size dependency; predator-prey dynamics 1606
Cryptomonas, maculata; ultraviolet light, effects; biochemical and spectroscopic analysis 2836
flatfish
ecology; Teleostei; symposium proceedings 1623
flats (More at COASTS ...)
flats: mud
macrotidal; Korea, SW coast; intertidal sediments 2044
flats: sand
North Sea, Jade region; surface moisture; pore water; salinity; in German, English abstract 192
flats: tidal
Wadden Sea; Brachyura; Carcinus, maenas, abundance after winter 2799
flexure: ice
Arctic Ocean; internal waves, packets 1844
flocs: particle
fractal aggregates, in geophysics 1760
flood basalts
Permian-Triassic boundary; Siberian Traps; volcanism, rapid eruption 388
mantle plumes; volcanism, initiation of, model; oceanic plateaus 2146
flooding
calculating; Vietnam, coast; South China Sea 2029
floor (See also ocean-, seafloor; bathymetry, bottom, relief, sediment-water interface, topography, toponymy; more at LITHOSPHERE ...)
flora (See also microflora; ALGAE, diatoms, eelgrass, fungi, macrophytes, periphyton, plants, pollen, seagrasses; more at ORGANISMS ...)
flora-fauna interactions
benthic communities; conference papers 2717
Florida
Indian River, Estuary; malathion, assimilation; organophosphates 232
Charlotte Harbor; estuarine flushing, and residence times 643
Apalachicola Bay; salinity, horizontal gradients, effects ... 1317
Sarasota Bay; coastal sediments; shoreline dynamics; carbonates, enrichment, hurricane-induced 1368
S; British West Indies, Caicos Platform; sediments, generation of fabrics and facies; burrow networks, faunal, excavation and storm infilling 1383
NW peninsula; Trichechus, manatus; manatees; distribution, movements 1629
Panama City beach; Mexico: Gulf of, N; Amphipoda; Haustorius, jayneae n.sp. 1676
Apalachicola Estuary; Copepoda, planktonic; seasonal patterns in adult, copepodite, nauplius, and egg abundance in the seabed 2284
SW, off; shelf sediments; mud-bank destruction and transgressive sand sheet formation 2589
manatees; Trichechus, manatus; debris ingestion 2838
near Sarasota; Pliocene, site; fossil record; chronostratigraphy, linking marine and terrestrial 3073
Florida Current
sources; currents; Sverdrup transport 663
Florida Escarpment
base of; Mexico: Gulf of; biogenic methane; brine seeps, abyssal 826
Mexico: Gulf of; erosion terraces 1406
flow (See also inflow; more at FLUID DYNAMICS ...)
nonlinear, near a corner; boundary currents, western 31
influence of a lower layer; eddies, nonlinear, propagation 106
steady two-layer exchange; Gibraltar: Strait of, through 634
recent progress in dynamics studies; straits; U.S. report to IUGG 635
Hawaiian Ridge, effects of; North Pacific; thermohaline structure; circulation 645
assimilation modelling studies; California, N, off; coastal zone, transition area, dynamics; currents 665
over; seamounts, large (Fieberling Guyot); internal waves, trapped, tide-driven 699
ocean; remote sensing; acoustics, scintillations, spatial filtering of; observations 709
over rough beds; wave-current interactions; current shear, stresses and velocities; model 723
mesoscale; North Pacific, NE; Fieberling Seamount, around; water column, thermohaline structure 1134
incompressible fluids; vorticity; turbulence; acoustics; fluid dynamics 1245
rotating, stably stratified, through a group of obstacles; fluid dynamics 1246
fields; Atlantic, 30°S to 77°N; temperature; salinity 1769
combined, velocity distributions in; waves; currents 1837
field, in; eddies, mesoscale structure dynamics 1895
near-surface, normal and tangential components; satellite estimates 2416
across the equator; Atlantic; water masses, North Atlantic Deep Water; volume transport 2423
residual and tidal; North Sea; tidal fronts, mixing 2427
fluid dynamics; currents; vorticity; salt fingers; lab experiments in physical oceanography; collection 2489
stability and mixing; Bengal: Bay of, N; monsoons, SW, during 2518
mid-depth oceanic; Juan de Fuca Ridge, S; hydrothermal vents, near 2600
effect of fluid motion; organic matter, dissolved; bacteria, uptake by 2752
effects; San Diego Trough, microtopography; California; Harpacticoida, mudballs built by; Tharyx, luticastellus . 2805
Great Barrier Reef; shelf currents, and slope; momentum, linear systems analysis 2901
effects of water movement; corals, distribution, prey capture .. 3171
flow: abyssal
Samoa Passage, into; Pacific; deep circulation 675
flow: air
topography, complex, over; turbulence, closure schemes; mesoscale planetary boundary layer numerical model simulations, cold air outbreaks 762
flow: baroclinic
China; Bo Hai; currents, tidal and residual; model; in Chinese, English abstract 33

flow: barotropic
on: Long Island Sound; East River, effect of 23
sea level, response to pressure forcing 44
flow: boundary layer
fluid dynamics; ordered and chaotic states following separation 1236
flow: coastal
modification; Spain, NE coast; submarine canyons 14
near-surface; California; statistical properties 653
flow: equatorial
South Pacific; water masses, Antarctic Intermediate Water path 677
flow: fluid
and pore pressure; Barbados, and Oregon; accretionary wedges 2603
flow: geostrophic
quasi-; oceanographic data, assimilation; optimal interpolation, model 622
equatorial circulation 1776
flow: oscillatory
fluid dynamics; Lagrangian circulation 125
flow: river
tides; interactions discussed 45
flow: shear
fluid dynamics; long waves; solutions of the Burns condition 121
inviscid; fluid dynamics; blocking 122
stratified, rotating; interaction with an isolated obstacle 1240
stratified; turbulence; mixing 2944
flow: strait
Mediterranean Sea; Otranto Strait; water masses 1805
flow: stratified
ridges, intersecting coasts, over 1887
flow tanks (More at TANKS ...)
flow: tidal
data; estimation of parameters of hydraulic models 680
flow: topographic
periodically forced; fluid dynamics; rotating fluid experiments 728
flow tracers
Atlantic; hexachlorocyclohexane, isomers 2584
flow: wind-driven
circulation; buoyancy 11
linear Galerkin solutions 2401
and geostrophic; Indian Ocean, tropical; monsoon currents 2411
sea level, VLF variations, calculations 2910
flow: zonal
forced; stability criteria; fluid dynamics 118
flows: gravity
free-surface; fluid dynamics 1239
flows: lava
submarine; seawater, -lava interactions 2147
flows: pyroclastic debris
Japan, shallow submarine Shirahama Group; paleomagnetic evidence 3110
flows: shallow-water
pollutant transport, and dilution, wind-augmented 1091
flowslides: submarine
turbidity currents; physics, modelling 272
flow-through systems (More at TANKS ...)
fluid<s> (More at FLUID DYNAMICS ...)
fluid dynamics (See also advection, CIRCULATION, CONVECTION, DIFFUSION, DISPERSION, Eulerian streaming, FLOW, FLUXES, gyres, hydrodynamics, mixing, PRESSURE, shoreline dynamics, stratification, streamwise streakiness, TRANSPORT, turbulence, vortices, WAVE DYNAMICS ...)
surface waves, over rotating fluids 66
ocean; mixing, studies, history 107
lenses, density; eddies 117
instability, parametric 119
turbulent diffusion, models; Lagrangian representation 120
shear flow; long waves; solutions of the Burns condition ... 121
shear flow, inviscid; blocking 122
stratification; gravitational instability; embedded layer of low-viscosity fluid 123
Lagrangian circulation; oscillatory flow 125
turbulence, modelling; mathematical analysis 604
turbulence; mixing; Kolmogorov similarity hypotheses for scalar fields 725
turbulence, tiered 2-D and beta-plane; energy spectra and coherent structure 727
topographic flow, periodically forced; rotating fluid experiments 728
convection, vacillatory, in rotating sphere at infinite Prandtl number 730
vortical lenses; stratified fluids; lab investigations 1234
thermohaline staircase, horizontal propagation mechanism . 1235
boundary layer flow; ordered and chaotic states following separation 1236
gases; liquids; Boussinesq approximation, asymptotic aspects 1238
gravity flows, free-surface 1239
bottom topography; friction, effects in rotating flow 1242
barotropic instability; bifurcations in a low-order model with self-interaction 1243
air bubbles; release from an underwater nozzle 1244
vorticity; turbulence; acoustics; flow, incompressible fluids 1245
flow, rotating, stably stratified, through a group of obstacles ... 1246
baroclinic instability, radiation-induced 1247
Rossby waves; mixing, chaotic; vorticity 1248
Navier-Stokes equations 1249
hetons, head-on collisions 1251
thermal bars; lab studies 1880
Ekman boundary layer, theory of; nonlinear boundary conditions 1892
predictor-corrector method for models using eddy-stream function variables 1893
mixing, 3-D compressible layer; inviscid spatial stability 2477
vorticity, filamentary; stability in 2-D geophysical vortex-dynamics models 2485
turbulence energy, models; viscosity, spectral, models 2486
rotating and stratified flows; fossil turbulence 2488
flow; currents; vorticity; salt fingers; lab experiments in physical oceanography; collection 2489
turbulent diffusion; Rossby waves, barotropic; applications 2942
Hamiltonian; internal waves; vorticity, potential 2943
baroclinic instability, linear; Ekman dissipation, and sloping boundaries 2945
fluid dynamics: topological
vortex rings, linking 1889
vortices, linking rings 2383
fluid flow
and pore pressure; Barbados, and Oregon; accretionary wedges 2603
fluids: geothermal
Iceland, Hengill area; gas geochemistry 1413
fluids: hydrothermal
chemistry; U.S. report to IUGG 831
sediments, influence of; beryllium, isotope concentrations .. 3059
Mid-Atlantic Ridge, Snake Pit site; helium; methane 3063
fluids: stratified
thermal fronts, evolution; dependence on initial conditions .. 116
topography, flow over; waves, finite-amplitude, resonant generation of 689
in; vortex waves, solitary 1226
vortical lenses; fluid dynamics; lab investigations 1234
internal waves, spatial structure 1840
stably-; intrusions, structure of the head zone 1875
internal waves; Green's function and point sources 2454
fluids: vent
microbial methane, enhanced oxidation 990
fluid-solid interface
rough; sound, transmission; acoustics; identity of the Rayleigh-Fourier and extinction theorem method solutions 94
flumes (More at TANKS ...)
flumes: wave
in; Stokes drift 1178
fluorescence
techniques, evaluation; microbiota; DNA, and RNA, measurements 917
improved method; ammonium, concentrations, determining; natural waters 1307
induced, measurements; light, absorption; yellow substance 1589
fluorometry (See also microfluorometry ...)
flushing: basin
California, S; San Pedro Basin; San Nicolas Basin 2899
flushing: estuarine
and residence times; Florida; Charlotte Harbor 643
flutes (More at SEDIMENTARY STRUCTURES ...)
fluvial sediments
U.S., E coast; estuaries, coastal plain 273
fluxes (More at FLUID DYNAMICS ...)
fog (More at AEROSOLS, CLOUDS ...)
water collection; coastal zone 2965

fogs: coastal
bogs, blanket; evaporation 2538
food
supply, in relation to; Baltic Sea; Kiel Bight; sedimentation, rate, effects on; fecal pellets 2233
Food and Agriculture Organization of the U.N. (Use FAO)
food chains (More at TROPHIC DYNAMICS ...)
dynamics; picoplankton; upwelling zones; reaction-diffusion model 2683
food resources (See also hunger; more at RESOURCES ...)
food webs
unusually simple; Southern Ocean; predators, birds, mammals; a major leak in the biological carbon pump 433
importance in; nutrients, particulate organic, biologically imported; detritus; reef communities 1340
patterns; trophic dynamics; lessons from a species-rich web . 2200
diatoms, as sources; carbon, C-13 rich 2212
food webs: microbial
estuaries; synergism between research and models 2723
Baltic Sea; eutrophic estuaries, tideless 2767
Baltic Sea; eutrophic estuaries 3178
sensitivity; eutrophication; pollutants, enrichment 3222
food webs: pelagic
Dinoflagellata, heterotrophic, quantitative importance and trophic role 933
structure; coastal zone; benthos, interactions with 2668
food webs: planktonic
carbon; nitrogen; size-based dynamics 1604
Benguela Current, ecosystems; size-based dynamics 1605
food-signal theory
population dynamics; population regulation and the functional response 1582
foraging
behavior; Pinnipedia; Halichoerus, grypus; diving; seals, movements 461
density-dependent, and mutual interference; Brachyura; Callinectes, sapidus; predation, on infaunal clams 470
Foraminifera
benthic; Oligocene, and Miocene sediments; Indo-Pacific; Pleurostomella, concava n.sp. 328
fossil to recent record; West Indies, Trinidad, Tobago; Globorotalia, menardii zone, significance 329
Quaternary; World Ocean; Globigerinita, clarkei 521
benthic, morphology and microhabitat preferences; North Atlantic, W 522
benthic, as indicators of gradient of marine influence; paralic environments 523
Mexico; Gulf of, NW; water masses, association with 524
planktic; North Atlantic; water masses, indicators 525
tiny, benthic; Bermuda Rise; distribution, taxonomy 526
tiny, shallow-water; Red Sea; Elat; Gulf of; taxonomic notes 527
planktonic assemblages, June 1989; Kuroshio, Current, across; in English abstract, Chinese 528
and thecamoeban distributions; Quebec, Saguenay Fjord; polluted sediments, pulp mill 565
biofacies succession; Quaternary, Late; British Columbia; Fraser River, Delta 848
planktonic; Globigerinoides, sacculifer, lunar reproduction cycle; life history 1014
nutritional and related experiments 1016
planktonic; Southern California Bight, San Pedro Basin; upwelling environments; seasonal C and O isotopic variability 1017
Mollusca; , benthic fauna; fauna: benthic; rates of movement and sedimentary traces (laboratory studies) 1018
benthic; Barents Sea; distribution of morphological groups .. 1687
East Pacific Rise; Abyssotherma, pacifica, structure and biology 1688
carbon and oxygen isotope composition; Mediterranean Sea; Bannock Basin; sediments 2108
assemblages; Eocene, Late; Oligocene; Canada, E; Newfoundland, NE shelf; paleoecology 2111
sample preparation, the search for a reliable mounting medium 2197
planktonic, keel structure; parallel evolution 2299
benthic; Bahamas, San Salvador; surface textures 2300
recent benthic; Saudi Arabia, coast; Arabian Gulf 2302
planktonic; ontogeny and habitat of modern menardiiform forams 2303
planktonic, response; Southern California Bight; San Pedro Basin; upwelling, and seasonal hydrographic conditions 2362
planktic; Pacific, W; Eniwetok Atoll; calcareous nannofossils 2591
benthic, fossil record; Pacific, W equatorial; productivity, paleo-; paleoceanography, glacial to postglacial change . 2608
Neogene, Late; Neogloboquadrina, dutertrei; lineage morphometric analyses 2613
biostratigraphy; Pacific, W tropical; Eniwetok Atoll; sediments, borehole 2614
planktonic; barium, contents 2616
planktonic; Cretaceous, terminal; Tethys, and warm transitional waters; biogeography, patterns; fossil record .. 2617
Albian, Late, to Early Turonian; North Atlantic; fossil record; paleoslope model 2618
China, seas; Ostracoda; paleobiogeography 2619
Norwegian Sea, -Greenland Sea; bacteria; sediments, deep-sea; distribution of hydrolytic activity 2754
planktonic; Arabian Sea, E; ecology, distribution (30 spp.) ... 2828
unilocular; Argentina 3079
planktic; Cretaceous, Late; Heterohelicidae; biostratigraphy 3080
Mississippi Delta, lower; Arcellacea; controls on spatial distributions 3197
Foraminiferida
Reussellidae, generic revision 2301
benthic; England, Southampton Water; pollution indicators 2334
fossil<s> (See also micro- and nannofossils ...)
fossil fuels
biomass burning; climate, effects on; heating or cooling? .. 134
fossil record
China; Huanghai Sea, S; sediments 325
Arabian Sea, NW; Hyalinea, balthica; sediments 847
Phanerozoic; extinction, a kill curve for marine species 849
California; San Nicolas Island, high-energy coast; coastal zone; thanatocoenoses, modern 850
a model of onshore/offshore change; faunal diversity 851
trace fossils; abyssal communities; ecologic interpretations . 852
diatom evidence; Africa, NW, off; Quaternary, Latest; upwelling, variability 1417
Jurassic, Late; Cretaceous, Early; epeiric seas, and oceans; nannoconids as paramount environmental recorders; in French, English abstract 1445
Cretaceous-Tertiary boundary, across; North Atlantic, Coastal Plain; extinction, selective, and survival 1448
Proterozoic, end; evolution, why macroscopic animals appeared so late 1713
Pliocene; North Atlantic; Ostracoda; paleoceanography, shallow-water 2085
dinoflagellate cysts; Pliocene; paleoclimate, reconstruction; methods comparison 2091
Pliocene; Pleistocene; North Pacific; paleoclimate, evolution 2099
mammal size gradients; paleoclimate; evolution, of size; calibrating the paleothermometer 2106
southward faunal shifts; Pleistocene, last glacial; North Atlantic; thanatocoenoses, submerged 2110
Arctic Ocean, trans-; Bering Strait, submergence 3.5 Ma, following; biological invasions; biogeography 2112
Northern Hemisphere; Southern Hemisphere; biological invasions; biotic interchanges; consequences 2202
biotic interchanges; biogeography; symposium 2206
paleoecology; ecology, contemporary, implications for 2341
biomolecules; biochemical systematics; molecular paleontology 2386
Brachiopoda; shells, calcite, influences on composition; paleoceanography 2605
Mollusca; shells, fossil and modern; amino acid racemization, /epimerization, kinetics of 2615
Cretaceous, terminal; Tethys, and warm transitional waters; Foraminifera, planktonic; biogeography, patterns 2617
Albian, Late, to Early Turonian; North Atlantic; Foraminifera; paleoslope model 2618
Pliocene, site; Florida, near Sarasota; chronostratigraphy, linking marine and terrestrial 3073
paleoclimate, and models 3258
fossil turbulence
fluid dynamics, rotating and stratified flows 2488
fossils
new ichthyoliths; Indian Ocean, central; ferromanganese nodules, and crusts 327
fouling communities
pollution, transfer from unpolluted to polluted sites; impact on community structure 558

dredging, effects; effects on larval settlement, community development ... 988
fouling organisms (More at ORGANISMS ...)
fractal aggregates
in geophysics; particle flocs ... 1760
fractal analysis
dimension of drifter trajectories; eddy diffusivity, horizontal ... 1250
fractal surface
roughness; remote sensing; signal processing ... 2390
fractals
fractal nature; sea ice, draft profile ... 1204
fracture zone<s> (More at LITHOSPHERE ...)
fracture zones
Atlantic; Vema Fracture Zone, transverse ridge; crust, geology ... 880
Guinea; Gulf of; Niger Delta; crust; magnetic field, anomalies ... 1477
Fram Strait
Arctic Ocean; phytoplankton communities; distribution in relation to hydrography ... 2682
Greenland Sea, W; bacterial communities, psychrotrophic; biomass, nutritional requirements ... 2774
Framvaren Fjord
Norway, S; hydrogen sulfide; oxidation ... 2581
France
Biscay; Bay of; temperature, monthly mean; in French, English abstract ... 3
SW, Quercy; shelf sediments, carbonate; microfossils, assemblages ... 326
Biscay; Bay of; zooplankton communities; annual cycle of abundance, composition, size spectra ... 456
Bay of Saint-Brieuc; benthic macrofauna; collection, settlement patterns, biotic interactions ... 476
Gironde Estuary; turbid plumes; satellite data ... 668
W Brittany; subtidal communities, rocky coast; factorial analysis in ecology ... 969
environmental problems; tin; tributyltin; pollution, assessment, regulations, prospects ... 3240
Fraser River
Delta; Quaternary, Late; British Columbia; Foraminifera, biofacies succession ... 848
free fall vehicles (More at OCEANOGRAPHIC APPARATUS ...)
French Polynesia
hotspot volcanism; basalts; in French, English abstract ... 375
French-American Mid-Ocean Undersea Study (Use FAMOUS)
frequency standards
time standards; special issue ... 2387
freshwater (More at WATER ...)
production of; seawater desalination; technologies ... 812
content; Azores, N of; heat; summer variations ... 2898
freshwater flux
forcing; circulation, decadal and interdecadal variability ... 1793
seasonal; Atlantic, tropical; surface temperature, effects of 2396
freshwater runoff
stratification, model ... 115
freshwater-seawater boundary
near; plant communities, coastal; water relations ... 2830
freshwater-seawater interface (More at FRONTS, INTERFACES, WATER ...)
friction
effects in rotating flow; fluid dynamics; bottom topography ... 1242
friction: bottom
term; tides, propagating in channels; compact approximations ... 681
front<s> (See also BOUNDARY LAYERS, convergence, INTERFACES, intrusions, LAYERS, ZONES; more at ATMOSPHERE, OCEAN ...)
frontal circulation (More at CIRCULATION ...)
frontal jets
California, N, off; currents; coastal zone, transition, structure ... 671
frontal oscillations
Newfoundland, NE shelf; currents ... 1817
frontal zones
internal gravity waves; numerical modelling ... 1197
Greenland Sea; nitrogen, uptake; plankton ... 2216
fronts
North Atlantic, E; Cape Verde Frontal Zone, characterized; water masses ... 678
permanent; Ligurian Sea; Tunicata, mid-water; relations ... 1591
south polar front; Southern Ocean; Kerguelen Island, and Heard Island, near, autumn of 1987 ... 1815
fronts: coastal
in; organochlorines, persistent ... 810
fronts: convergent
U.K.; pollution, implications for; estuaries ... 1725
fronts: density
boundary currents, coastal; instability and nonlinear evolution; in Japanese, English abstract ... 1167
fronts: saline
Caribbean Sea, during spring bloom; microplankton; trophic dynamics, structure ... 2211
fronts: sea breeze
breezes, land, sea; gravity currents, atmospheric; inland penetration, Kelvin-Helmholtz billows ... 754
fronts: shelf
Ireland; satellite and field observations ... 36
fronts: shelf-break
Australia; Bass Strait, cascade; nutrients; plankton ... 440
formation and maintenance in an unstratified flow ... 1165
fronts: temperature
marine; Greenland Sea; air-sea interactions ... 1917
fronts: thermal
evolution; stratified fluids; dependence on initial conditions ... 116
fronts: thermohaline
Taiwan, N of, in winter ... 39
fronts: tidal
mixing; North Sea; flow, residual and tidal ... 2427
fronts: vorticity
along; current jets; meanders, evolution ... 1156
evolution; bottom topography, sloping, over ... 1166
fronts: weather
meteorology, attack on a paradigm; report ... 3260
Fucus
vesiculosus; Sweden, Oresund; radionuclides, seasonal variation ... 1029
canopy; community succession; ice scours, massive, following; Mytilus ... 3168
fuel (More at POWER ...)
fuel oil (More at OIL ...)
fuels: fossil
biomass burning; climate, effects on; heating or cooling? ... 134
fumigated sediments
Bivalvia, utilization by; Abra, alba; Polychaeta, utilization by; Eupolymnia, nebulosa ... 973
Fundy: Bay of
Chignecto Bay; currents, tidal and buoyancy-driven ... 664
Maine; Gulf of; Appalachian Mountains, N, implications for; tectonics, deep seismic reflection data ... 2626
Saint Lawrence Estuary; Amphipoda; shelf communities, supra-benthic; subcommunity structure compared ... 2803
fungal biomass
significance; Thalassia, hemprichii, litter biodegradation; seagrass detritus ... 992
fungi (More at FLORA ...)
nitrate reductase, determination, significance ... 2761
invasion by; Bengal; Bay of; Andaman Islands; Scolecobasidium, sp.; corals, massive, necrotic patches ... 2850
Fungiidae
Indo-Pacific; Scleractinia; corals, mushroom; taxonomy, phylogeny, biogeography ... 503
Java Sea; Scleractinia; coral bleaching; stress, tolerance, and interference by life history strategy ... 1639
Funka Bay
Japan; Tokyo Bay; coastal sediments; uranium ... 197
fusion: cold
no evidence for; Hawaii; Kilauea, active crater; tritium, concentrations ... 2634

gabbros (More at IGNEOUS- ...)
Galapagos Islands
corals; manganese, paleochemistry ... 1377
gales (More at WINDS ...)
Galicia Bank
North Atlantic, E margin; Goban Spur; lithospheric heat flow, variations ... 1474
Gammaridea
families and genera; Amphipoda; handbook of keys, diagnoses 1671

7 families; Red Sea: Aqaba: Gulf of; Amphipoda; corals, rubble, from ... 1682
garbage
plastic pollution; letter ... 589
GARP Atlantic Tropical Experiment (Use GATE)
gas (See also bubbles ...)
U.K., activities; offshore petroleum; oil ... 1563
natural; U.S.; petroleum potential, future supply; oil ... 2874
gas bubbles
movement; sediments, fine-grained, unsaturated ... 300
gas exchange
in near-saturation conditions; air-sea interface; bubbles, role 1965
seawater; salinity, effects ... 2566
gas hydrates
Okhotsk: Sea of; Kamchatka, and Paramushir Island, off; sediments ... 1399
seeps; Kamchatka, off; metals, transition; zoobenthos ... 1703
gas vents
Okhotsk: Sea of; Paramushir Island, off; metals, anomalous behavior ... 2186
gases
fluid dynamics; liquids; Boussinesq approximation, asymptotic aspects ... 1238
vents; Canada, E; shelf sediments; pockmarks, gas-related 2055
gases: dissolved
nitrous oxide, dissolved; automated measurement technique . 1962
gases: greenhouse
surface temperature, response; some updated statistical assessments ... 145
halocarbons, for instance; cause of relative strength ... 164
climate change, signals; circulation, changes, possible effects on signal; editorial ... 742
atmospheric temperature, surface; analysis of changes 1890-1985 ... 1268
atmosphere; carbon monoxide; methane ... 2549
gases: trace
Europe, coastal zone; atmosphere; CO_2, CH_4, COS ... 1940
gases: volcanic
submarine exhalations; Italy; Aeolian Islandse of; geochemical investigations ... 385
Gastropoda
rocky shores; algal colonization; grazing, impacts ... 972
Nucella, lapillus; recovery in populations suffering from imposex ... 1032
North Pacific, NE, coastal marshes; biological invasions; snails, native vs introduced, interactions ... 1577
dog whelks, imposex in; tin; organotin pollution, widespread 1710
Scotland, lochs; Nucella, lapillus; tin; tributyltin, mariculture-related ... 3202
Scotland, oil ports; Nucella, lapillus; tin; tributyltin, impacts from large vessels ... 3205
Nucella, lapillus, imposex in; tin; tributyltin; geographic uniformity of response and effects ... 3206
Nucella, lapillus, imposex in females; tin; tributyltin; steroid titers ... 3215
Gdansk Deep
Adriatic Sea; macrozoobenthos, long-term changes; benthic communities ... 3223
gelatinous zooplankton
Benguela Current, ecosystem; advection, large-scale, effects 2222
Gelidium
seaweeds; phycocolloids, commercial; workshop ... 2307
genetic engineering
designer fish, test-tube; exotic species, invasions; cautions required ... 2367
genetic variation
high levels; invertebrate populations, natural ... 2269
Geochemical Ocean Sections Program (Use GEOSECS)
geochemical reference materials
program progress to date ... 2969
evaluation procedures ... 2972
geochemical surveys
Adriatic Sea; Trieste: Gulf of ... 1390
geochemistry
marine; sediments; particulates, and dissolved species; symposium papers ... 1357
geochemistry: analytical
geological samples, and inorganic matter; review ... 175
geochronology (See also dating, sclerochronology ...)
geodesy
Earth response to loading; tides, ocean loading; earth tides .. 1469
Global Positioning System; positioning, GPS marine applications ... 1724
plate motions, parameters; VLBI and SLR baseline length changes ... 2140
geodesy: satellite
tides, harmonic solutions ... 1169
climate, studies, impact on; global change ... 2346
geodetic surveys
need for; Indian Plate; plate motions, constraining ... 1482
Geodynamics Experimental Ocean Satellite (Use GEOS)
geographic information systems
workshop; U.S., S, Florida and Georgia; Trichechus, manatus; habitats, managing; environmental management; manatees ... 1630
remote sensing; integration ... 1716
geography: ocean
World Ocean; history of research and findings, individual regions portrayed; special volume; in French, English abstract ... 1067
geoid
anomalies, interpretation; Iceland; mantle hotspots ... 339
seismic tomography; plate motions; U.S. report to IUGG . 887
anomalies, and topography anomalies; lithosphere, thermal, density heterogeneities; gravity field ... 2115
expression; North Atlantic, central; Kane Fracture Zone; basement, depth to ... 2116
Bermuda, from; Cape Cod, to; surface height, mean; satellite data ... 2622
and depth anomalies; Mid-Atlantic Ridge; mantle, upper, temperature and composition; seismic waves; joint data inversion ... 2653
geoid subsidence
postglacial; equatorial zone, oceans, over; new spectral formalisms ... 2623
geologic record
cosmic spherules ... 2196
dating, methods; review ... 2005
impact craters, terrestrial ... 2195
world-wide, stratigraphic intervals; petroleum source rocks . 2657
geological samples
and inorganic matter; analytical geochemistry; review 175
geology (See also catastrophism, EARTH, planetology ...)
Alaska, SE; Canada; British Columbia, NW; geophysics; symposium ... 2012
surficial; Canada, NW; shelf sediments ... 2013
geology: petroleum
Fiji; basin sediments ... 3134
geology: seabed
Canada, E; shelf sediments ... 2036
geology: structural
computer software; microcomputer techniques and applications ... 1999
geomagnetic<s> (More at MAGNETICS ...)
geomagnetic field
marine anomalies, source implications; lithosphere; remanent magnetization, thermo- ... 332
paleomagnetism; overview 1987-1990 studies; U.S. report to IUGG ... 855
Gauss to Matuyama; Pliocene, Late; Pleistocene, Early; Mediterranean Sea; sapropels; astronomical calibration, implication for the polarity time scale ... 1429
Australia, SE; coast effect; 2-D interpretation ... 1462
transient; planetary magnetism; the *K*-derived planetary indices ... 1464
long-lived transitional states; polarity reversals, and the two dynamo families ... 2621
geomagnetic poles
virtual; Matuyama-Brunhes boundary; magnetic field, reversals; non-zonal equatorial symmetry ... 334
geomorphology
seafloor, endogenic relief formation ... 1363
geophysical data
display, interpretation; computer graphics; image analysis; signal processing ... 2006
geophysical exploration
crust; seismic anisotropy, advances in research ... 3114
geophysical fluid dynamics (More at FLUID DYNAMICS...)
magnetohydrodynamic dynamo, action; review ... 1758
geophysical hydrodynamics
properties of the approximation of the linear equations on a spaced grid ... 1237

geophysics
Alaska, SE; Canada; British Columbia, NW; geology; symposium ... 2012
geophysics: mathematical
conference papers ... 2663
Georges Bank
scallop grounds; North Atlantic, NW; benthic invertebrates, mega-, assemblages; environmental factors affecting faunas ... 984
North Atlantic; tidal currents, interactions; eddy flux, skew eddy fluxes ... 1804
Georgia Bight
Gray's Reef; benthic communities; metabolism; nutrients, cycling ... 975
Georgia: Strait of
British Columbia; microplankton communities; patchiness; mosaicism ... 1592
British Columbia; heavy metals, Pb, Zn, Cu, Cd; carbon; nitrogen; sediments, accumulation in ... 1991
geoscience data
computer technology; a new approach ... 1360
geostrophic circulation
Bransfield Strait, W, region; Antarctica; water masses ... 1132
geostrophic flow (More at FLOW ...)
quasi-; oceanographic data, assimilation; optimal interpolation, model ... 622
equatorial circulation ... 1776
geosynclines (More at LITHOSPHERE ...)
geotechnical properties: sediment
Canada, off, Flemish Pass; effects of biological processes on strength and consolidation properties ... 281
earthquakes, -induced settlement; clays ... 827
geothermal energy (More at ENERGY ...)
geothermal fluids
Iceland, Hengill area; gas geochemistry ... 1413
geothermal modelling
forward and inverse techniques, symposium papers ... 1470
geothermal surveys
temperature, gradients; sediments ... 2120
German Bight
Kiel Bay; nutrients, N, P; plankton; hypoxic water, conditions ... 577
data; solar radiation; application of Dobson and Smith's model ... 1902
Germany
NW, Lagerdorf-Hemmoor; Campanian-Maastrichtian boundary; North Atlantic, E, DSDP sites 548A, 549, 551; biostratigraphy, correlation; paleobiogeographical and -oceanographical implications ... 2109
Darss-Zingst Bodden, chain; eutrophication; water quality, possible restoration measures ... 3040
Greifswalder Bodden; coastal sediments; chemical studies; in German, English abstract ... 3054
Gibbula
cineraria; Scotland, St. Andrews coast; Nucella, lapillus; Asterias, rubens; epifauna, developing assemblages; grazers, effects of; recruitment, of epifaunal invertebrates 3172
Gibraltar: Strait of
through; flow, steady two-layer exchange ... 634
Cadiz: Gulf of; Mediterranean area; water masses, exchange; mixing; volume transport ... 672
salinity, anomaly; turbulent diffusion ... 1958
gillnets
acoustic reflectivity enhanced to reduce entanglement; Cetacea; commercial fisheries; target strength measurements, implications for incidental dolphin take ... 1096
modifications to reduce entanglement; Cetacea; commercial fisheries; merits of acoustic modifications discussed ... 1097
Gironde Estuary
France; turbid plumes; satellite data ... 668
glacial fjords
Alaska, SE; sedimentation, ice-proximal, rates ... 2051
glacial isostasy (More at isostasy ...)
effects; interferometry, VLBI measurements ... 858
glacial meltwater
discharges; North Atlantic; deglaciation; deep circulation; climate change, abrupt, 15-10 kyBP ... 1432
glacial troughs
Quaternary, Late; Canada, W; tectonics; shelf sediments 2126
glaciated shelves
sedimentation ... 2040
glaciation (More at ICE ...)
last, during; Portugal, off; upwelling, increased; diatom evidence ... 307
during, pCO_2 reduction; World Ocean; atmospheric carbon dioxide; carbon cycle, global ... 1263
glaciations; Pliocene, Late; Mediterranean Sea, central; continental and marine responses ... 2083
Pleistocene; Northern Hemisphere; climate ... 130
Glacier Bay
Alaska; sediments, laminated; fjords, seafloor prodeltaic deposits ... 2065
glaciers
ice sheets; global cryosphere; state of balance ... 1210
advance; Hypsithermal, during; Antarctic Ice Sheet, volume state implications; global warming ... 2089
glaciers: tidewater
Maine: Gulf of; deposition, structural control of; sedimentation ... 2032
sub-polar; Barents Sea, N, outside Nordaustlandet; depositional environments; sediments ... 2038
grounding-line systems as second-order controls on fluctuations of termini ... 2066
Canada; Arctic area; sedimentation, glaciomarine ... 2069
glaciology
contributions to; ice sheets; satellites, Seasat ... 700
glaciomarine sedimentation
paleoclimatic significance; discussion ... 2046
paleoclimate, significance; symposium papers ... 2079
glaciomarine sediments
Barents Sea; sound, velocity, and related properties; correlations ... 1401
Maine, inner shelf; seismic stratigraphy ... 2049
glass (More at SILICATES ...)
glasses: basalt
picritic; Hawaii, off Kilauea ... 2142
glasses: volcanic
Kilauea; Hawaii; mantle, secrets of the; report ... 2381
Global Atmospheric Research Program (Use GARP)
global change
satellite geodesy; climate, studies, impact on ... 2346
keeping it honest; greenhouse effect; biota, marine, role minor; essay ... 2500
studies; wind field, satellite, utilization; climate ... 2527
Mission to Planet Earth, program description; U.S., NASA; climate ... 2863
program; U.S.; climate; Navy/NOAA Joint Ice Center, role; ice, regional and global analyses and forecasts ... 2867
global climate
system sensitivity; circulation modelling; impact of initial conditions ... 136
effects on; atmospheric aerosols; symposium; 24 papers ... 774
global commons
and international (dis)agreements; ecosystems; environment; anthropocentric or ecocentric? ... 3253
global cryosphere
ice sheets; glaciers; state of balance ... 1210
global energy balance
paleoclimate, implications for; influence of various forcing variables ... 2950
global heat budget (More at HEAT ...)
global measurements
oceans; toward a global ocean observing system ... 1050
global monitoring
sea level, observing system ... 47
Global Paleomagnetic Database
magnetic field, data; databases; design, installation, and use with ORACLE ... 1463
global positioning
crustal deformation; spectral comparison of GPS and strainmeter measurements ... 905
satellites; U.S. report to IUGG ... 1080
Global Positioning System (More at navigation ...)
introduction to; satellite positioning; geological applications 1081
use; crustal deformation, measurement; precision and accuracy of interstation vectors ... 1358
use; crustal deformation, measurement; influence of errors in orbit determination networks ... 1359
potential uses; petroleum exploration ... 1566
positioning, GPS marine applications; geodesy ... 1724

Kalman-filtered measurements; gravity field, shipboard measurement ... 3083
Kalman-filtered fixes; navigation, ship ... 3238
global precipitation
climatologies; model and observations compared ... 1931
global productivity
ocean; coral reefs, role ... 1634
global temperature
atmospheric carbon dioxide; silicate weathering, effects of ... 1904
record; climate; do bidecadal oscillations exist in the record? ... 1905
surface; paleogeography; atmospheric carbon dioxide; coupled model with latitudinal contrast ... 2612
global tides
energetics; Geosat altimetry data ... 1168
global warming
random walks, manifestation of ... 131
probable effects; climate change; productivity, oceanic, changing ... 431
attempts to measure; Indian Ocean, S; Heard Island, Experiment; acoustic waves, travel times; lecture by Walter Munk ... 715
Cretaceous, Mid-; mantle plumes, superplumes; carbon dioxide ... 1421
South Africa; Benguela Upwelling, area; chlorophyll, *-a* distribution; phytoplankton, possible effects on; fish, pelagic, implications for ... 1586
ocean-atmosphere interactions; atmospheric carbon dioxide, increase; GCM simulations analyzed ... 1747
climate change; comments on mechanism proposed limiting tropical Pacific warming ... 1751
Southern Ocean; iron fertilization; Geritol fix refuted ... 1754
climate, sensitivity, projections; review ... 1907
Hypsithermal, during; Antarctic Ice Sheet, volume state implications; glaciers, advance ... 2089
climate, least-cost stabilization ... 2369
climate; sun, role; report ... 2384
global weather
climate; unlikelihood of low-dimensional attractors ... 1303
Global Weather Experiment (Use GWE)
Globigerinita
clarkei; Quaternary; World Ocean; Foraminifera ... 521
Globigerinoides
sacculifer, lunar reproduction cycle; Foraminifera, planktonic; life history ... 1014
Globorotalia
menardii zone, significance; West Indies, Trinidad, Tobago; Foraminifera, fossil to recent record ... 329
glucose
uptake; surface microlayer; carbon dioxide, production; radiation, UV and visible, influence of ... 2728
glutamate
assimilation patterns; Antarctic Peninsula; Bransfield Strait, region; thymidine, assimilation patterns; phytoplankton blooms, spring ... 1652
Gnathostomulida
Fiji; Tonga; New Zealand ... 2270
Hawaii ... 2271
Tahiti ... 2272
Goban Spur
North Atlantic, E margin; Galicia Bank; lithospheric heat flow, variations ... 1474
Golden Horn
Turkey; sediments; pollution, chronology ... 1997
Gondwana (More at PLATE TECTONICS ...)
reconstruction; India, S; Antarctica, E; plate tectonics ... 370
break-up, possible trigger for; Antarctic Ice Sheet; plate tectonics ... 429
Gonyaulax
catenata; Dinoflagellata; Mesodinium, rubrum; plankton, vertical migration ... 1609
Gorda Ridge
Juan de Fuca Ridge; basalts, MORB, geochronology and petrogenesis ... 3102
Gorgonacea
corals; population dynamics, growth ... 504
Gorringe Bank
Neogene, to Quaternary; North Atlantic; crustal deformation; tectonics ... 1483
Gorringe Ridge
North Atlantic; tectonics, and geological structure; surveys, analysis ... 1561
Gotland Basin
floor and slope; Baltic Sea; benthic deserts; zoobenthos, of 'desert' and transitional zone above ... 2249
government (See also public administration; more at LAW, POLICY and RESOURCE MANAGEMENT ...)
government employees
U.S.; professional associations; current ethics proposals harmful to scientists ... 1105
grab samplers (More at SAMPLERS ...)
gradients (See also thermal gradients; lysocline, thermocline; more at ATMOSPHERE, FRONTS, INTERFACES, LAYERS, OCEAN, STRUCTURE, ZONES ...)
grain size (More at SEDIMENTATION ...)
Grand Bank
Newfoundland, off; bottom temperature; implications for exchange rates ... 627
outer; Newfoundland; benthic macrofauna; community structure, spatial, post-mortem erosion of ... 2251
granite (More at IGNEOUS- ...)
graphics: computer
geophysical data, display, interpretation; image analysis; signal processing ... 2006
gravel bars
migration and overstepping; shoreline dynamics ... 253
gravitational instability
fluid dynamics; stratification; embedded layer of low-viscosity fluid ... 123
Black Sea Current ... 1148
gravity
anomalies; lithosphere, oceanic, age; relationship ... 335
anomalies; spreading centers, extinct; as test of gravity models of active centers ... 338
gravity capillary waves
steep; ripples, excitation; numerical simulations ... 1190
gravity currents (More at CURRENTS ...)
atmospheric; breezes, land, sea; sea breeze fronts; inland penetration, Kelvin-Helmholtz billows ... 754
turbulent plumes, generated by; sedimentation ... 2039
boundary mixing; propagation along an incline ... 2413
gravity field
Hudson Bay, eastern; Canada; implications for a flexural origin for the Nastapoka Arc ... 1459
gradients; satellite altimetry ... 1468
anomalies; India, W margin off Goa and Mulki; crust, structure ... 1555
measurements; Long Island Sound; aircraft instrumentation ... 2114
lithosphere, thermal, density heterogeneities; geoid, anomalies, and topography anomalies ... 2115
anomalies, constraints from; crust, structure; extensional tectonics, mechanism ... 2122
and bathymetry; Indian Ocean; Chagos-Laccadive Ridge, origin and compensation; aseismic ridges ... 2638
shipboard measurement; Global Positioning System, Kalman-filtered measurements ... 3083
gravity flows
free-surface; fluid dynamics ... 1239
gravity: tidal
Europe; tides, ocean, loading by ... 1819
gravity waves (More at WAVES ...)
surface, small-amplitude; bathymetry, slowly-varying; chaotic development ... 51
surface; calculating nonlinear energy transfer ... 61
surface; acoustic backscattering, Doppler ... 99
surface; current meters, acoustic Doppler; field verification of measurements ... 1177
porous bottoms ... 1824
surface; cyclostrophic balance ... 1827
surface; capillarity, effects in a cylindrical container; wetting boundary conditions ... 2430
variational approximations ... 2440
gravity waves: internal
spectral modelling ... 1194
frontal zones; numerical modelling ... 1197
grazers
effects of; Scotland, St. Andrews coast; Gibbula, cineraria; Nucella, lapillus; Asterias, rubens; epifauna, developing assemblages; recruitment, of epifaunal invertebrates ... 3172
grazing
impacts; Gastropoda; rocky shores; algal colonization ... 972
prey-size dependency; predator-prey dynamics; flagellates, free-living ... 1606

grazing: zooplankton
Ceratium, bloom decline; diatoms ... 3158
Great Barrier Reef
coral reefs; numerical models, self-seeding effects shown in ... 968
Scleractinia, Goniastrea spp., Platygyra; corals, comparative demography; age- and size-dependent classifications ... 993
Australia; pollution; coral reefs; opinions; 4 papers ... 1095
Scleractinia, associated with; Copepoda; Lichomolgidae, key to the genera ... 2811
shelf currents, and slope; momentum, linear systems analysis; flow ... 2901
Great Britain (See also British Isles, U.K. ...)
U.K.; science; research; commentary ... 1740
Greece
Thermaikos Gulf; Mediterranean Sea; pesticides; runoff; pollution ... 226
S Evvoikos Gulf; Quaternary; sea level, changes; tectonics, extensional ... 356
Thermaikos Gulf; phytoplankton communities; composition and biomass ... 449
waters around; organochlorines; fish, red mullet ... 549
Megara Basin; Neogene; extensional tectonics; sedimentary basins; tectono-sedimentary development ... 1418
Thermaikos; Gulf of; zooplankton, populations, differentiation; pollution, presence of ... 2335
greenhouse effect (More at ATMOSPHERE ...)
implications for; atmospheric carbon dioxide; plants, aerial fertilization effect; climate warming ... 133
global change, keeping it honest; biota, marine, role minor; essay ... 2500
greenhouse gases
surface temperature, response; some updated statistical assessments ... 145
halocarbons, for instance; cause of relative strength ... 164
climate change, signals; circulation, changes, possible effects on signal; editorial ... 742
atmospheric temperature, surface; analysis of changes 1890-1985 ... 1268
atmosphere; carbon monoxide; methane ... 2549
greenhouse warming
coral bleaching; role in reef stress unproven; report ... 616
greening: industrial
sustainable economy; making the transition ... 1087
Greenland
Denmark; Cetacea; organochlorines; porpoises, harbor ... 2321
N; Peary Land; marine mammals ... 2698
Greenland Ice Sheet
as record, 1530-1940; atmospheric carbon dioxide; ice cores, trapped in ... 1297
ice cores; paleoclimate; climate change, implications for; report ... 1752
Greenland Sea
for instance; plankton, nanno-, pico-; polar seas, importance in; in German, English abstract ... 441
Norwegian Sea; rifting; seafloor spreading, asymmetric; tectonics ... 860
Labrador Sea; margin; crust, structure; new seismic data ... 1514
Norwegian Sea; circulation; wind; salinity, the Great Salinity Anomaly in the 1970s; numerical experiments ... 1779
Norwegian Sea; circulation, numerical model ... 1788
air-sea interactions; temperature fronts, marine ... 1917
nitrogen, uptake; frontal zones; plankton ... 2216
Arctic Ocean, from; Norwegian Sea; Iceland Sea; saline outflows; water masses, deep water formation ... 2419
W; Fram Strait; bacterial communities, psychrotrophic; biomass, nutritional requirements ... 2774
Calanoida; distribution in late fall ... 2809
Norwegian Sea; Kolbeinsey Ridge; Vesterisbank Volcano; Polarstern investigations of sediments, bathymetry; in German, English abstract ... 3235
Greifswalder Bodden
ecology; Baltic Sea, S; project aims and results ... 3236
groundings: ship
Red Sea; coral reefs ... 3207
groundwater
table, responses; waves; run-up ... 254
groundwater discharges
submarine; Sweden, Laholm Bay ... 3067
growth
postlarval; Mollusca, 5 spp.; Pecten, maximus, and others; reproduction, patterns ... 477
rate; natality; survival, rate; recruitment; relationships ... 2205
growth: bacterial
rates; Dead Sea; blooms, halobacteria; heterotrophic activities ... 2757
subantarctic; Macrocystis, pyrifera; kelp, giant, influence of ... 3175
growth: coral
hermatypic, forms; Scleractinia; application of tree architecture models ... 2783
growth: microalgal
microphytobenthos; nutrients, uptake ... 3200
growth: microbial
metals, speciation; review ... 490
growth: mussel
rates; tin; tributyltin, site-specific effects; biomonitoring, and assessment ... 3214
growth: phytoplankton
Dinophyceae; Prorocentrum, minimum; nitrates, uptake ... 543
chromium, effects ... 566
limited; North Pacific, subarctic; iron, deficiency, by ... 2218
colimitation; nickel; nitrogen ... 3159
growth: plankton
and herbivory; Southern Ocean; Dinoflagellata; possible effects on phytoplankton biomass ... 1022
pico-, nanno-; Protozoa, density-dependent effects on assemblages ... 1590
Guam
coastal waters; nutrient chemistry ... 785
guano
nutrient supplies; Antarctica; seabirds; nunataks, inland, to; effects of ornithogenic products on ecosystem structure and functioning ... 1649
seabird, variable consequences of; nutrients; intertidal communities, structure ... 2253
guanosine triphosphate (Use GTP)
Guaymas Rift
California; Gulf of; hydrothermal deposits; nature of naphthoids ... 424
guilds
reef-building, checklist for membership; reef communities; new approach to community studies ... 970
Guinea: Gulf of
Niger Delta; crust; fracture zones; magnetic field, anomalies ... 1477
Atlantic; upwelling, equatorial and coastal; in French, English abstract ... 2908
Gulf Stream
Cape Hatteras, N of; North Atlantic, NW; currents; water masses ... 35
nonlinear behavior of varicose disturbances; currents ... 662
atmospheric circulation, mesoscale; marine boundary layer; numerical simulation of cold air outbreak ... 763
meander; current transport; satellite imagery ... 1151
chlorophyll production, enhancement; seawater, surface; nitrates, rainwater ... 2234
Blake Plateau, over; rings; currents; coalescence event ... 2412
effects on ocean waves; waves; currents ... 2432
filaments, carried on; Dinoflagellata; Gymnodinium, breve; phytoplankton blooms; red tides, expatriate ... 2834
deep; currents, ADCP measurements ... 2903
Cape Hatteras, N of; water masses, discharged ... 2940
frontal eddy influence; U.S., shelf; shelf communities; productivity ... 3256
gusts: wind
over-water; air turbulence ... 751
guyots
Bougainville Guyot; New Hebrides Arc, (Vanuatu); South Pacific, W; accretionary wedges; collision tectonics; structure of the arc-guyot collision zone ... 2123
Gymnodinium
breve; Gulf Stream, filaments, carried on; Dinoflagellata; phytoplankton blooms; red tides, expatriate ... 2834
gyres (More at CURRENTS, FLUID DYNAMICS ...)
subtropical, along 24°N; North Pacific; hydrographic surveys ... 629
gyres: abyssal
North Atlantic; Antarctic Bottom Water, flow ... 1133
gyres: subtropical
South Atlantic, E; eddy, deep-reaching, anticyclonic ... 659
North Pacific, central gyre; primary production ... 934
gyres: tropical
South Atlantic, near 13°S, 5°E ... 638

gyres: wind-driven
3-D structure, ventilation and subduction (U.S. report to IUGG) 641
Gyrodinium
aureolum; Dinoflagellata; plankton, decimeter scale heterogeneity; pycnocline, blooms in ... 922

habitat<s> (See also chambers, niches, refuges, tanks; more at DIVING, ECOLOGY ...)
habitat selection
marginal ice zone; mammals, marine ... 459
habitats
modification; Bivalvia, growth affected; seagrasses; relationship ... 1021
managing; U.S., S, Florida and Georgia; Trichechus, manatus; environmental management; geographic information systems, workshop; manatees ... 1630
complexity; Arabian Sea; Lakshadweep; seagrass beds; macroinvertebrates, abundance; coral atolls ... 2705
habitats: intertidal
vegetated; nekton, collection via flume weir ... 1627
Haiti
Cretaceous-Tertiary boundary; tektites; impact hypothesis, bearing on ... 2609
Hakone Volcano
Japan; Mount Fuji; volcanoes ... 1495
Halacaridae
identification; North Atlantic; Acari ... 2780
Halichoerus
grypus; Pinnipedia; foraging, behavior; diving; seals, movements ... 461
Halicyclops
revision and 1 n.sp.; California; Cyclopoida ... 3185
Halifax Harbor
Canada; shoreline litter ... 595
Halimeda
tuna, growing on; Mediterranean Sea, NW; epiphytic hydrozoa, distributions ... 1642
haline fronts (More at FRONTS ...)
halite (More at SALT ...)
halocarbons
for instance; greenhouse gases; cause of relative strength ... 164
halogenated organic compounds
biodegradation; hydrocarbons ... 545
halophilic bacteria
and halotolerant; North Seaoast, and the Steinhuder Meer 2749
Hamalpheus
acanthops n.gen., n.sp.; Samoa, lava tube dwellers; Alpheidae, stygiophilic ... 2802
handicapped
physically disabled; science, recruiting nontraditional players; women; minorities ... 3254
harbor<s> (More at COASTS ...)
harmonics: tidal
Japan; Kagoshima Bay; numerical study ... 43
Harpacticoida
sediment-dwelling, impact on; epifauna, large, disturbance by; seagrass communities; predator-prey dynamics ... 985
organic matter, microbially-synthesized aggregates, ingestion; fecal pellets, egestion ... 2765
mudballs built by; San Diego Trough, microtopography; California; Tharyx, luticastellus; flow, effects ... 2805
hatcheries (More at AQUACULTURE ...)
Haustorius
jayneae n.sp.; Mexico: Gulf of, N; Florida, Panama City beach; Amphipoda ... 1676
Hawaii
Kilauea; submarine lava, degassing history ... 379
mantle plumes; hotspot volcanism; magma melts, generation ... 395
Bivalvia; Isognomon, californicum; cadmium, bioaccumulation ... 564
Mauna Kea; basalts, tholeiitic and alkalic, petrogenesis; volcanoes, evolution ... 874
waters around; micronekton; neritic-oceanic interface, communities at ... 963
reef ecosystems; student research, projects; 12 papers ... 1047
basalts, evolution, geochemistry; hotspots, melting model; volcanism ... 1502
Alenuihaha Channel; benthic megafauna; bathyal zone; fish, benthic ... 1633
off Kilauea; basalt glasses, picritic ... 2142
Iceland; East African Rift, System, Nyiragongo/Nyamuragira; Antarctica, Mt. Erebus; hotspot volcanism; mantle plumes, deep; great circle distribution ... 2159
Gnathostomulida ... 2271
Kilauea; mantle, secrets of the; volcanic glasses; report ... 2381
Kilauea, active crater; tritium, concentrations; cold fusion, no evidence for ... 2634
SE of; North Pacific; abyssal basins; geophysical studies ... 2654
seals, monk; endangered species; new protection program ... 2890
Mauna Loa; Kileaua; basalts, tholeiitic; volcanism; magma, primary, source ... 3111
Hawaiian Ridge
effects of; North Pacific; flow; thermohaline structure; circulation ... 645
hazard analysis: seismic
earthquake prediction; symposium collection; 14 papers ... 907
hazardous waste
Law of the Sea; ocean dumping; transboundary movement 1736
hazardous waters
diving; pollution; hypothermia; symposium papers; 16 papers ... 586
Heard Island
Experiment; Indian Ocean, S; acoustic waves, travel times; global warming, attempts to measure; lecture by Walter Munk ... 715
heat (See also TEMPERATURE, thermal ...)
and mass, budgets; North Atlantic; oxygen, fluxes; nutrients, fluxes ... 628
content changes; North Pacific, W, 1964-82; upper ocean ... 2896
Azores, N of; freshwater, content; summer variations ... 2898
and water budgets; surface temperature, anomalies; circulation, GCM response ... 2953
heat budget
role in; storm microseisms ... 1935
Heat Capacity Mapping Mission (Use HCMM)
heat engine
ocean as; climate, prediction; stiffness of chaotic systems ... 1269
heat exchange
analysis of; air-sea interface; El Niño, 1983 ... 146
baroclinic instability; air-sea interactions ... 1273
heat flow
reduction with depth; seafloor, DSDP Hole 504B; convection, borehole fluid, evidence for? ... 1473
models; sedimentary basins; hydrocarbons, generation; basin analysis of the South Mozambique Graben ... 1565
heat flow: lithospheric
North Pacific; Okinawa Trough ... 344
Middle American Trench, vicinity; new data ... 345
Bengal Fan; Indian Ocean, central; sediments, evidence for dewatering ... 859
Canada, offshore; Jeanne d'Arc Basin; crust ... 1472
variations; North Atlantic, E margin; Goban Spur; Galicia Bank ... 1474
constraints; South Pacific, superswell; lithospheric swells ... 1475
Australia, NW, off; Exmouth Plateau; numerical model ... 1476
misconceptions; plate tectonics, delayed discovery? ... 1742
Costa Rica Rift; seismicity, lateral heterogeneities in seismic velocity; crust; DSDP site 504 ... 2164
Lake Baikal; Russia; hydrothermal vents ... 3060
Caribbean Sea; Mexico: Gulf of; comments ... 3084
heat flux
meridional; North Pacific, 35°N ... 1765
turbulent and net; air-sea interactions; radiation flux; clouds; modelled relationships ... 1901
turbulence; mixing; thermocline, main, in ... 2476
Arabian Sea, variability in thermal response; monsoons, response to forcing by; circulation; air-sea interactions 2515
turbulent, and moisture and buoyancy; air-sea interface; wind, low speeds; surface, fluxes ... 2954
derivation; Australia, NNE of Townsville; ocean-atmosphere interactions ... 2958
heat flux: latent
satellite data, climatological studies ... 2947
heat flux: surface
Pacific, W equatorial; wind, westerly bursts ... 138
Kuroshio, influence of; China; Chang Jiang River, region; rainfall, meiyu ... 2509

heat: radiogenic
production model; crust; mantle, upper 1471
heat: surface
balance; Pacific, W equatorial; in Chinese, English abstract .. 7
heat transfer
conductive; magma chambers, freezing, convecting; hydrothermal vents; implications for black smokers 306
heat transport (More at TRANSPORT ...)
poleward; review of hierarchy of models of increasing resolution 1261
oceanic; climate change; chaos theory, applications; report 2380
heavy metals (More at METALS ...)
speciation; natural waters; in French, English abstract 189
Baltic Sea, S; sediments, enrichment factors in 806
influence; yellow substance, determination in estuarine areas; pH, influence 1212
Turkey; Marmara: Sea of, NE, Golden Horn Estuary and Izmit Bay; sediments 1352
transport; Japan; Seto Inland Sea 1354
Qatar, coast; algae 1702
accumulation; Bivalvia; Donacilla, cornea; calcium, content 1709
Pb, Zn, Cu, Cd; British Columbia; Georgia: Strait of; carbon; nitrogen; sediments, accumulation in 1991
Ireland, Cork Harbour; sediments; shellfish; baseline 2314
Cuba, Cienfuegos Bay; fish, *Micropogonias furnieri*; baseline .. 2320
antibiotics; bacteria, vent, 8 taxa, susceptibility 2738
distribution; India; Bombay; pollution; seawater; particulates 3037
Aegean Sea; benthos, flora and fauna; baseline 3204
Hebrides (See also Inner-, New- and Outer Hebrides ...)
helicopters (More at AIRCRAFT ...)
heliotropism
stromatolites; plate tectonics, reconstructions 317
helium
Mid-Atlantic Ridge, Snake Pit site; hydrothermal fluids; methane 3063
ratios, secular variations; volcanoes, active; eruption and plug hypothesis 3109
Hellenic Arc
and Cyprus Arc; Mediterranean Sea; arc tectonics 349
Aegean Sea; hydrothermalism; metallogenesis, processes; volcanic arcs 1415
WNW; Mediterranean area; earthquakes, estimating probability of recurrence times 3116
Hellenic Trench
Mediterranean Sea, E; sediments, structural features 2063
Hemigrapsus
sanguineus, a W Pacific crab; U.S., Atlantic coast, first discovery 1988; Decapoda, grapsid; exotic species 1009
herbivores
marine; marine plants; coevolution, myths; mutualism, precarious 1581
plant chemical defenses; marine-terrestrial contrasts in ecology 2201
herbivory
Mexico: Gulf of, N, field experiments; seagrass beds, influence on; sea urchins, grazing, role 3173
herbivory: zooplankton
microalgae, development as tracer particles 2691
Heterohelicidae
Cretaceous, Late; Foraminifera, planktic; biostratigraphy 3080
heterotrophy: ecosystem
California, Tomales Bay; land-sea interface; metabolism; C-N-P stoichiometry 1333
hetons
head-on collisions; fluid dynamics 1251
hexachlorobenzene (Use HCB)
hexachlorocyclohexane
isomers; Atlantic; flow tracers 2584
Henry's Law constants; seawater, and distilled water; temperature, as function of 2585
hierarchy
and scases; ecological modelling, ecohydrodynamic 2666
hills: abyssal
morphology; global and regional stochastic analysis 3045
Hippidae
large, brachyuran-like larva; Banda Sea; Anomura; the largest known zoea 2285
Hispaniola
Tertiary; Caribbean Sea; neotectonics; fault zones, Trans-Haitian; tectonics 2128
historical climatology
a source; al-Biruni's tenth century chronology 1059
history of oceanography
Reid: Joseph L.; tribute 1110
Revelle: Roger; tribute 2376
history of science (See also specific scientific disciplines; more at SCIENCE ...)
community ecology; the past century, perspective 1103
Kolmogorov: A. N.; personal reminiscence 2882
Kolmogorov: A. N.; reminiscences 2883
Holland (Use Netherlands)
Holocene
3 events; Washington State; submergence, sudden, probably coseismic 308
Cuba, W; tectonics 354
emergent limestone; Mariana Islands; North Pacific, W; reef sediments; facies development model 820
North America; climate; salinity; reconstruction of past changes using diatom-based transfer function 836
Pleistocene, Late; Japan; sea level, changes; tectonics, implications for; mantle rheology 864
Nile Delta, N plain; delta sediments; petrology, distribution, deposition of plant-rich sequences 1367
Nile Delta; Egypt; Mollusca, faunas, paleobathymetry; delta sediments 1443
Tibet, W; climate, 13-kyr record; paleoclimate 2093
palynology; paleoclimate; pollen analysis; principles, population and community ecology, paleoclimatology; review 2107
Early; Atlantic, W; submerged reefs, relict 2592
China; Yangtze River; Yellow River; estuaries, development 3068
Holothuria
tubulosa; Echinodermata, deposit feeders; sediment communities; microbiota; relationship 2702
tubulosa; Echinodermata, deposit feeders; fecal pellets, decomposition; sediment communities 2703
Holothuroidea
3 taxa; South Africa, W coast; effect of water movement on distribution and interaction 3179
homogeneous layer (More at LAYERS ...)
Homoloidea
poupiniid; North Pacific; Mariana Islands; Brachyura, majid; Bothromaia, griffini n.gen., n.sp.; Poupinia, hirsuta, remarks on 2294
Hong Kong
sandy beaches, wave-exposed; fauna 986
coal ash lagoons; environmental monitoring; an 'oyster watch' monitor 1028
Tolo Harbor; pollution, massive; editorial; the decline goes on 1089
hot brines
Red Sea; report 1117
hotspot<s> (More at LITHOSPHERE, MANTLE ...)
hotspot volcanism
French Polynesiahe Marquesas alignment; basalts; in French, English abstract 375
Canary; North Atlantic, SE; crust, off Morocco, effects on . 383
Hawaii; mantle plumes; magma melts, generation 395
Hawaii; Iceland; East African Rift, System, Nyiragongo/Nyamuragira; Antarctica, Mt. Erebus; mantle plumes, deep; great circle distribution 2159
hotspots
melting model; Hawaii; basalts, evolution, geochemistry; volcanism 1502
Iceland; earthquakes; tectonics, present; plate boundaries 1519
reheating, due to; lithospheric stress, thermoelastic; tectonics 2183
traces; Indian Ocean, Rajmahal Traps origin; Crozet Islands, hotspot; aseismic ridges, 85°E, origin; reconstruction 2630
and pre-existing thinspots; mantle plumes; continental lithosphere 2655
hotspots: mantle
Iceland; geoid, anomalies, interpretation 339
Huanghai Delta
China; Bo Hai, Sea, S; sediments, near-surface; mass physical properties 824
Huanghai River
and Estuary; China; river runoff; mercury, effects on occurrence, transportation and speciation 1353

Huanghai Sea
S; China; fossil record; sediments 325
N; China; internal tides, effects; currents, tidal, vertical structure 2455
shelf, formation and evolution on; China; sand ridges; in Chinese, English abstract 3048
Hudson Bay
eastern; Canada; gravity field; implications for a flexural origin for the Nastapoka Arc 1459
sea ice; upper ocean; variation of upper layer dynamics during seasonal breakup 2460
humans
as predators, impact; Australia; New South Wales; coral reefs, rocky 598
trampling effects; rocky shores; benthic fauna 2342
Antarctica; Pygoscelis, adeliae; aircraft; penguins, Adelie, effects on 2870
humic acids
carbon; nitrogen; high temperature combustion determinations 2979
humidity
intelligent chilled mirror humidity instrument; instrumentation; buoys, ships, for use on 733
variability in and above the MBL; atmospheric boundary layer, marine 1899
profiles; atmosphere, over ocean 2496
humus (More at ORGANIC- ...)
hurricane<s> (More at STORMS ...)
hurricanes
wave prediction, parametric model; comment 73
1990 season; North Pacific, E 758
1990 season; Atlantic 764
Gilbert, effects; Mexico, Cozumel; Porifera; coral reefs; fish 971
Arctic; Bering Sea, over; synoptic analyses 1290
Hugo, landfall; North Carolina; South Carolina; surface wind, distribution 1292
wind, speeds; estimating probabilities using empirical model .. 2544
Hugo 1989; South Carolina, Folly Beach; coastal development; erosion policy, national, needed; CZM, failings 2875
Hyalinea
balthica; Arabian Sea, NW; sediments; fossil record 847
hydraulics: tidal
Canada; Saint John River 42
hydrocarbon<s> (See also alkanes, GAS, OIL, PETROLEUM; more at ORGANIC COMPOUNDS ...)
hydrocarbon biodegradation
potentials; Prince William Sound; microbial populations; sediments, shoreline, fertilized; Exxon Valdez, spill 1705
hydrocarbon degradation
polluted sediments; drilling muds, low-toxicity base oil ... 1994
hydrocarbon production (More at POWER ...)
hydrocarbon resources (More at RESOURCES ...)
hydrocarbons
seepage, formed by; Canada, NE; Baffin Island; carbonate sediments, vuggy crust 291
halogenated organic compounds; biodegradation 545
Mediterranean Sea, W; Rhone Delta; pollution 804
non-aromatic; China; Chang Jiang Estuary; suspended matter, in; characterization, intraannual variations 807
reserves; Arctic Ocean, area; petroleum potential, offshore 908
geologic rationale; Caribbean area; petroleum exploration 910
reserves; Caribbean Sea; petroleum potential; 7 papers .. 911
evolution; Barbados, evolution; Caribbean Sea; tectonics; accretionary terranes 912
content; Oman, coastal waters; Persian Gulf; seawater; sediments; biota, oysters 1083
generation; heat flow, models; sedimentary basins; basin analysis of the South Mozambique Graben 1565
baseline; Antarctica, environment; pollution monitoring; review 1988
Korea, W Korea Bay Basin; oil, source rock potential 2188
fraction; North Sea; atmospheric particulates; distribution, origin 2553
potential reef traps; Miocene, -Pliocene; Pacific; Solomon Islands, Iron Bottom Basin; sediments 3135
hydrocarbons: aromatic
PAH; chemical analysis; sediments, and other marine particulates; Shpol'skii fluorometry 174
volatile; Selenastrum, capricornutum; toxicities, and bioconcentration, relationship; microalgae 552
Sweden; Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; atmosphere, in 1947
Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; atmosphere, in 1987
sediments; rapid screening method 1990
hydrocarbons: chlorinated
Adriatic Sea, N; biota, mussels, levels in 2844
hydrodynamics (More at FLUID DYNAMICS ...)
processes, influence of; Saint Lawrence: Gulf of, N; sediment transport 2024
hydrodynamics: coastal
modelling 13
hydrodynamics: estuarine
diffusion; numerical experiments; in In Korean, English abstract 2479
hydrodynamics: geophysical
properties of the approximation of the linear equations on a spaced grid 1237
hydrogen
ice-water interface; oxygen; equilibrium isotope fractionation 1206
hydrogen sulfide
balance; Black Sea; abyssal zone 1323
Chesapeake Bay; oxidation 1983
Norway, S; Framvaren Fjord; oxidation 2581
hydrographic modelling
estuaries; oceans; an equation of state for numerical models . 621
hydrographic surveys (More at SURVEYS ...)
Philippine Sea, deep structure 38
North Pacific; gyres, subtropical, along 24°N 629
depth data; assessing data precision 1056
current meters, acoustic Doppler; use in mesoscale surveys .. 1149
Korea, off; Ulleung Basin; physical properties 2422
hydrography: chemical
East China Sea; Kuroshio, NE of Taiwan; variability in the frontal region 777
hydrologic cycle
clouds; radiation, Earth budget; modelling 2504
atmospheric energy 2967
Hydromedusae
4 n.spp.; Africa, SW coast; Cnidaria 2266
hydrophone arrays
flush-mounted, response to Corcos turbulent wall pressure spectrum; acoustics 95
hydrophones (More at OCEANOGRAPHIC APPARATUS, SOUND ...)
hydrophysical surveys
Atlantic; mesostructure 6
Kamchatka, SW shelf 1276
hydrothermal circulation
continental and marine, modelling 1412
mid-ocean ridges; 3-D simulation 1414
mid-ocean ridges; silica, behavior; coupled fluid flow and reaction 1416
spreading centers, along; NOAA's VENTS program 3233
hydrothermal convection (More at CONVECTION ...)
hydrothermal deposits (More at DEPOSITS ...)
California: Gulf of; Guaymas Rift; nature of naphthoids . 424
Juan de Fuca Ridge; sulfides, massive, radial growth rates and Pb-210 ages 1411
South Pacific, W; Lau Basin, tectonic environment; geochemistry 3062
Fe-rich; South Pacific, W, Teahitia-Mehitia, Mcdonald hot spot areas 3065
North Fiji Basin; Pacific; ferromanganese oxides 3142
hydrothermal fluids
chemistry; U.S. report to IUGG 831
sediments, influence of; beryllium, isotope concentrations .. 3059
Mid-Atlantic Ridge, Snake Pit site; helium; methane 3063
hydrothermal plumes
mega-; North Pacific, NE; Juan de Fuca Ridge, Cleft segment geology; seafloor spreading; lava, recent flows 873
iron, dissolved; manganese, dissolved; in-situ chemical mapping 1409
baroclinic vortices, shedding 2478
signatures; Mid-Atlantic Ridge 2601
particulates, sampling, analysis 3019
Mid-Atlantic Ridge, 26°N; structure, mass, interactions 3064
hydrothermal scavenging
Mid-Atlantic Ridge; radionuclides 2565

Mid-Atlantic Ridge; trace elements, flux modification ... 3061
hydrothermal sediments
microscopy, STM ... 2604
hydrothermal vents
fields; East Pacific Rise, 13°N; particulates, settling; sediment trap measurements ... 213
magma chambers, freezing, convecting; heat transfer, conductive; implications for black smokers ... 306
Ostrocoda, myodocopid; Pacific, E ... 513
distribution; East Pacific Rise; mid-ocean ridges; tectonics, and magmatism, relation to ... 1410
high-temperature; East Pacific Rise; suspended matter, in bottom waters; metals ... 2076
vicinity; manganese, biosedimentation ... 2078
near; Juan de Fuca Ridge, S; flow, mid-depth oceanic ... 2600
3 sites; temperature, time series ... 2602
South Pacific, Lau and North Fiji basins; bacteria, anaerobic S-dependent thermophilic; isolation, identification ... 2720
North Fiji Basin, Ridge; Pacific; geology, geochemistry ... 3057
Lake Baikal; Russia; lithospheric heat flow ... 3060
hydrothermalism
North Pacific; Juan de Fuca Ridge; sediments, hemipelagic; interactions ... 302
manifestations; Juan de Fuca Ridge, near; metalliferous sediments ... 303
quantifying inputs; sediments; terrigenous deposition, sources ... 304
North Pacific, NE; Juan de Fuca Rift, zone; radon, in bottom waters ... 305
magmatism; mid-ocean ridges; processes; U.S. report to IUGG ... 892
Hellenic Arc; Aegean Sea; metallogenesis, processes; volcanic arcs ... 1415
California; ophiolites, Trinity; crust, fossil slow-spreading center; isotope evidence for multistage hydrothemal alteration ... 2077
evolution of activity; Juan de Fuca Ridge; observations, mineral ages, Ra isotope ratios ... 3066
South Pacific; mineral resources; sedimentary basins; geology, geophysics ... 3144
near; Indonesia, seas around; bacteria, hyperthermophilic; archaebacteria ... 3177
hydroxyl: tropospheric
stability during ice ages, interglacials, and modern times ... 1941
Hydrozoa
Atlantic, W; Scyphozoa; medusae ... 2787
hydrozoa: epiphytic
distributions; Mediterranean Sea, NW; Halimeda, tuna, growing on ... 1642
hyperbaric chambers (More at DIVING, TANKS ...)
hyperbenthos (More at BENTHOS ...)
hypersaline channels
Arabian Gulf, Al-Khiran; Ostracoda, community ... 2273
hyponeuston (More at PLANKTON ...)
hypothermia
hazardous waters; diving; pollution; symposium papers; 16 papers ... 586
hypoxia
Finland; Gulf of; benthic macrofauna; effects of oxygen deficiency ... 1631
hypoxic water
Virginia; Rappahannock River ... 201
conditions; German Bight; Kiel Bay; nutrients, N, P; plankton ... 577
episode; Sweden, Gullmar Fjord Basin; Nematoda, changes and slow recovery of assemblage ... 2706
Hypsithermal
during; Antarctic Ice Sheet, volume state implications; glaciers, advance; global warming ... 2089
hypsographic surveys (More at SURVEYS ...)

Iberian Peninsula
North Atlantic, E; Lagrangian circulation; coastal zone, transition; currentsbservations ... 639
ice (See also glaciation, permafrost, pressure ridges ...)
water; clouds; broad band radiative transfer properties ... 151
global mass; Cenozoic, Late; climate change; paleoclimate; carbon dioxide, dynamics; temperature; first-order global model ... 741
regional and global analyses and forecasts; U.S.; climate; global change, program; Navy/NOAA Joint Ice Center, role ... 2867
Alaska; polar seas; remote sensing ... 3237
ice age carbon
Pleistocene; carbon storage and transfer between marine and terrestrial reservoirs ... 1116
ice cores
trapped in; Greenland Ice Sheet, as record, 1530-1940; atmospheric carbon dioxide ... 1297
Greenland Ice Sheet; paleoclimate; climate change, implications for; report ... 1752
Antarctica; snow, evidence for recent increases in accumulation ... 1849
Antarctica; Vostok; atmospheric carbon dioxide; paleoclimate ... 2508
ice drift
Newfoundland, NE shelf; wind, forcing, response to ... 1846
ice fauna (See also epontic communities; more at FAUNA ...)
ice flexure
Arctic Ocean; internal waves, packets ... 1844
ice floes
identifying; remote sensing, satellite images ... 1199
ice leads
sea; probable errors in width distributions ... 1847
pack; Antarctica; Southern Hemisphere, circulation sensitivity; ocean-atmosphere interactions ... 2933
ice microalgae
Barents Sea; photosynthesis, photoadaptation ... 1023
ice: pack
Weddell Sea, winter aggregations in; mammals, marine; seabirds ... 2198
ice scours
and grounding; seabed, disturbance; icebergs ... 2042
massive, following; Fucus, canopy; community succession; Mytilus ... 3168
ice: sea
Arctic Ocean; Antarctica, ocean around ... 79
variations; Antarctica, around; air temperature, seasonal; relationships ... 748
cover; Weddell Sea, off Kapp Norvegica; particle sedimentation, short-term variability; plankton, biomass, feeding activity; water masses, advection; relationships ... 788
beneath; Antarctica, waters around; micronekton; macrozooplankton; community structure ... 961
remote sensing, SAR, discrimination using texture statistics ... 1200
simulated; salt water, experiments in; NMR imaging ... 1202
radiation; radiative transfer model with vertical structure variations ... 1203
draft profile; fractals, fractal nature ... 1204
snow, cover; climate, competing effects in shaping ... 1205
microstructure; statistical description ... 1207
weather forecasting, ice forecasting; development of coupled model ... 1208
nearshore, movements; Alaska, Barrow, near; seabed, ice gouges; correlation ... 1209
Arctic Ocean; remote sensing, concurrent from submarine and aircraft ... 1211
from; Arctic Ocean; acoustics, reflections ... 1219
albedo, parameterization; climate modelling ... 1267
porosity; chlorophyll, content; relationships ... 1845
ridging; Weddell Sea, E ... 1848
Antarctica; sedimentary facies, associated ... 2045
Antarctica, waters around; epontic communities, structure; productivity ... 2214
melting; phytoplankton, released, aggregations of; microalgae ... 2224
remote sensing, multifrequency polarimetric SAR observations 2457
Hudson Bay; upper ocean; variation of upper layer dynamics during seasonal breakup ... 2460
Weddell Sea; diatoms, distribution; chlorophyll ... 2674
Arctic area; satellite detection during cloudy conditions ... 2918
Arctic area; Lancaster Sound; climate, measurement of state variables ... 2919
satellite imagery; DMSP special sensor microwave imager; NASA validation program ... 2920
satellite imagery; DMSP special sensor microwave imager ... 2921
chlorophyll; salinity; quantification of properties; in German, English abstract ... 2923
satellites, Landsat imagery; radiometry, AVHRR and airborne passive microwave; parameters compared ... 2924

remote sensing, operational ... 2925
thickness; Chukchi Sea; polynyas, measurements in ... 2926
under-ice draft profiles ... 2927
Antarctica, Atka Bay; energy budget, formation underwater, growth; in German, English abstract ... 2928
thickness determinations ... 2929
keel shape ... 2930
surface roughness, microscale, in-situ measurements ... 2931
satellite imagery; DMSP retrieval algorithm, comparison with Landsat imagery ... 2934
Bering Sea; Chukchi Sea; polynyas, location, extent ... 2935

ice sheets
glaciology, contributions to; satellites, Seasat ... 700
mapping; satellite altimetry ... 701
wind pumping; firn, through; 3-D theory ... 1201
glaciers; global cryosphere; state of balance ... 1210
maximum advance; Pleistocene, Valday time; Barents Sea, shelf; Scandinavian Ice Sheet ... 1423
West Antarctic Ice Sheet, changes in ... 2456

ice shelves
numerical modelling of dynamics ... 78
Antarctica; Ross Ice Shelf, dynamics ... 1843
circulation; water masses; ice-ocean interactions modelled ... 2459
flow; Antarctica; Filchner-Ronne Ice Shelf; in German, English abstract ... 2922

ice zone: marginal
Antarctica; sea level, height determination above; GPS applications ... 80
mammals, marine; habitat selection ... 459

icebergs
acoustics, active sonar ... 708
seabed, disturbance; ice scours, and grounding ... 2042

icebreakers (More at VESSELS ...)

Iceland
northern; Quaternary, Late; sea level, rising; shoreline dynamics; deltas, and spits, littoral terraces ... 260
mantle hotspots; geoid, anomalies, interpretation ... 339
intertidal meiofauna; sand beaches ... 473
present-day; basaltic eruptions; redox conditions evaluated ... 872
Scandinavia; Mollusca, new and little known ... 998
Hengill area; geothermal fluids; gas geochemistry ... 1413
magnetic surveys ... 1461
beneath Snaefellsjokull Volcano; Pleistocene, Late; mantle melting, increased; deglaciation, during; volcanism ... 1498
Scandinavia; lithosphere, imaging and understanding; crust; mantle; symposium ... 1513
earthquakes; tectonics, present; hotspots; plate boundaries ... 1519
and surrounding area; crust, seismic structure; basalts ... 1522
asthenospheric viscosity; deglaciation, post-glacial rebound ... 1553
Reykjanes Peninsula; magma, primary, petrology; rift tholeiites ... 2143
Hawaii; East African Rift, System, Nyiragongo/Nyamuragira; Antarctica, Mt. Erebus; hotspot volcanism; mantle plumes, deep; great circle distribution ... 2159
S shelf; mass flow deposits; basalts, hyaloclastite; volcanism, subglacial eruptions ... 2629
Lakagigar, 1783; volcanic eruptions; carbon dioxide, and sulfur degassing; lava, largest flow on earth ... 3105
Krafla; crust; volcanism ... 3122

Iceland Sea
Arctic Ocean, from; Norwegian Sea; Greenland Sea; saline outflows; water masses, deep water formation ... 2419

ice-ocean interactions
and air-; air-sea interactions; atmosphere, conditions; satellite imagery; legacy of the Seasat mission ... 140

ice-rafted debris (More at DEBRIS ...)

ice-water interface
hydrogen; oxygen; equilibrium isotope fractionation ... 1206

ichnofabric indices
and basin analysis; sediment facies ... 1444
sediment facies; symposium papers ... 1446

ichnofacies
and recent organism traces; South Pacific, W; New Caledonia, off; seafloor sediments ... 1447

ichthyoplankton (More at PLANKTON ...)
influences on distribution; Kerguelen Archipelago, around; Southern Ocean ... 445
guide to; Benguela Current, region; South Atlantic, E ... 945

ICZ (Use ITCZ)

igneous- (See also andesites, BASALTS, dykes, gabbros, granite, magma, ophiolites, peridotites, plutonic rocks, tholeiites, ultrabasites, volcanism ...)

igneous rocks
islands, oceanic; petrology ... 393
magma; toward a comprehensive classification ... 876
IUGS systematics ... 1500

image analysis
geophysical data, display, interpretation; computer graphics; signal processing ... 2006

Image Library and Browse System
satellite data ... 2857

imagery (More at REMOTE SENSING ...)

imagery: radar
remote sensing; focusing SAR images with long integration times ... 1125
waves, monochromatic; currents; simulation ... 2894
role; Canada, development; Arctic area; background, applications ... 3229

imagery: satellite
air-sea interactions; ice-ocean interactions, and air-; atmosphere, conditions; legacy of the Seasat mission ... 140
GMS data; nephanalysis ... 152
vorticity, synoptic vortices; remote sensing, evidence from ... 1882
clouds, global ... 1929
Sargasso Sea; mixed layer, depth; construction and accuracy analysis of images ... 2417
DMSP-SSM/I; cryosphere, data; status, research applications ... 2864
sea ice; DMSP special sensor microwave imager; NASA validation program ... 2920
sea ice; DMSP special sensor microwave imager ... 2921
sea ice; DMSP retrieval algorithm, comparison with Landsat imagery ... 2934

imaging: seismic
subducting lithosphere; trade-offs with deep path and near-receiver effects ... 902

imaging systems
radar, SIR-C/X synthetic aperture radar system; satellites, and Space Shuttle ... 1055

impact assessment (More at ENVIRONMENT- ...)
biota, aquatic; pollution, specific effects; usefulness of numerical methods ... 3208

impact craters
crust, ocean; magnetic exploration, model results ... 857
Cretaceous-Tertiary boundary; Mexico; Yucatan Peninsula; Chicxulub Crater ... 1428
terrestrial; geological record ... 2195

impact: environmental
predictions; Australia; accuracy, quantification analysis ... 1084
quantifying; coastal zone, the importance of inherent properties; ecometric analysis ... 1729
assessment; Long Island Sound; water quality ... 1731

impact hypothesis
bearing on; Cretaceous-Tertiary boundary; Haiti; tektites ... 2609

impact spheroids
authigenesis; Cretaceous-Tertiary boundary; constraints for high resolution stratigraphy ... 1435

impact spherules
Cretaceous-Tertiary boundary; geochemical constraints on source region of glasses ... 2101

impacts: bolide
giant; Earth; thermal equilibration modelled ... 2175
asteroids, near miss, January 1991 ... 2892

impacts: extraterrestrial
'winter'; Cretaceous-Tertiary boundary; paleobotanical evidence ... 323

impoundments: marsh
restored; macroinvertebrates, reestablishment; populations comparison ... 2243

impulse fluxes (More at FLUXES ...)

India
and surrounding regions; continent-ocean boundaries, definition; magnetic field, Magsat studies ... 341
S; Gondwana, reconstruction; Antarctica, E; plate tectonics ... 370
Thane creek; Polychaeta, Lycastis ouanaryensis; metals, heavy ... 544
S; insecticides, HCH, fate; coastal zone ... 809
northern; margin tectonics; multicyclic history ... 861
monsoon rainfall, summer; water masses, Pacific Ocean Warm Pool, position; relationship ... 1274

margin; Arabian Sea; seamounts; geophysical studies 1496
W margin off Goa and Mulki; gravity field, anomalies; crust, structure 1555
Laccadive Islands; zooplankton, diel patterns and emergence; coastal lagoons 1600
monsoon circulation, onset; model description and validation 1919
monsoon rainfall; monsoon circulation; secular variations in relationships 1932
response, concerns; Kuwait, Al Ahmadi, as origin; oil spills . 2363
E, off; oceanographic surveys; 1960 literature survey translated 2394
W, off; coastal currents; monsoons, NE, during 2414
off Trivandrum; waves, long-term characteristics 2441
over; surface temperature; monsoons, SW, during the course of 2517
over; monsoons, onset; rainfall, subsequent; relationship ... 2539
over seas around, 1989; cyclones; atmospheric depressions 2545
nutrients, distribution; estuaries, Periyar River 2569
off Kerala; coastal sediments; quartz, detrital grains; surface microtextural study 2595
W, off Saurashtra; sediments, shelf and slope; clay minerals 2596
E, Krishna to Ganges River mouth; shelf sediments; clay minerals 2597
E coast; shelf sediments; phosphates, interstitial and adsorbed 2598
W, Konkan; sediment communities; population dynamics, and community structure; macroinvertebrates 2716
Madras, off; bacteria, heterotrophic 2759
SW, off; Euphausiacea, larval, distribution 2817
SW coast; Laccadive Sea; Cyclopoida, ecology 2821
Bombay; heavy metals, distribution; pollution; seawater; particulates 3037

Indian Ocean (See also narrower geographic, physiographic and zonal designations ...)
internal tides; barotropic waves, internal 76
SE; South Pacific; tropical cyclones; 1988-89 season 156
central; ferromanganese nodules, and crusts; fossils, new ichthyoliths 327
E; plate boundaries; magnetic field, data, anomalies 372
central; ferromanganese nodules; biogenic influences on growth 426
N; Pacific, W; Coccolithophoridae; epicontinental seas; Recent monsoonal and fertility controls on coccolith assemblages 540
S; Heard Island, Experiment; acoustic waves, travel times; global warming, attempts to measure; lecture by Walter Munk 715
E; ocean-atmosphere interactions; mixed layer, modelling 745
central; Bengal Fan; lithospheric heat flow; sediments, evidence for dewatering 859
circulation, seasonal; topography, effects 1129
N; mixed layer, depth; Ekman pumping, velocity; monsoons, SW, during 1280
W equatorial, above; monsoon circulation; pre-onset transformations 1285
S; atmosphere; carbonyl sulfide, annual variation 1296
central basin; sediments; manganese nodules 1570
monsoon circulation; forcing mechanisms 2082
Aptian; Ontong Java Plateau; mantle plumes; volcanism, flood basalt 2148
Australia, felt in; earthquakes, 19 Nov 1906 2157
Mascarene Ridge, central zone; crust, seismic sequence analysis 2167
deep basins; Exmouth Plateau; crust, structure 2168
tropical; wind-driven flow, and geostrophic; monsoon currents 2411
variability over; Amsterdam Island, 1980-87; precipitation chemistry 2541
N, over; tropical cyclones, post-monsoon activity 2546
distributions over; atmospheric aerosols; trace metals, particulate 2551
particle flux, studies 2575
Rajmahal Traps origin; Crozet Islands, hotspot; hotspots, traces; aseismic ridges, 85°E, origin; reconstruction 2630
Seychelles, in; Deccan Traps, flood volcanism; tholeiitic dykes 2631
Chagos-Laccadive Ridge, origin and compensation; aseismic ridges; gravity field, and bathymetry 2638
central basin; ferromanganese crusts, mineralogy; metals, transition, and excess Th-230; implications for paleoceanographic influence on crust genesis 2658
central basin; manganese nodules; internal constitution 2659
W; East African Coastal Current; current transport, and structure 2906
Pacific; silica, -132 profiles 2974

Indian Plate
Australian Plate; plate tectonics; relative motions last 20 Myr 369
geodetic surveys, need for; plate motions, constraining ... 1482
geometry; Pakistan, Hazara Arc, beneath; earthquakes, hypocenters, velocity structures 2651

Indian River
Estuary; Florida; malathion, assimilation; organophosphates 232

indicator organisms (More at ORGANISMS ...)

indicators: pollution
England, Southampton Water; Foraminiferida, benthic ... 2334

indirect costs
universities; audits, GAO; consequences of abuses 2372

Indonesia
Asia, SE; collision tectonics; regional evolution since 43 Ma 367
Muriah, evidence from; magmagenesis, potassic alkaline; volcanism; subduction zones; interplay of subduction zone and intraplate processes 380
E; Quaternary, Late; sediment cores; palynology 1441
seas around; bacteria, hyperthermophilic; archaebacteria; hydrothermalism, near 3177

Indo-Pacific
Oligocene, and Miocene sediments; Foraminifera, benthic; Pleurostomella, concava n.sp. 328
Scleractinia; Fungiidae; corals, mushroom; taxonomy, phylogeny, biogeography 503

Indo-Soviet Monsoon Experiment (Use ISMEX)

Indus River
Arabian Sea, cores; river discharges, influence; calcium carbonate, content; sediments 2088

industrial effluents
Wales; sediments; PCBs 2586

industrial greening
sustainable economy; making the transition 1087

industry (See also drilling, MINING, offshore-, STRUCTURES ...)

inert gases (More at GAS ...)

inertial currents (More at CURRENTS ...)

inertial oscillations (More at OSCILLATIONS ...)

inertial waves (More at WAVES ...)

infauna (More at FAUNA ...)
North Sea, central; epifauna 467
distribution; California; intertidal zone; macroalgae, seasonal blooms, effects of 1636

infauna: benthic
distribution; Mediterranean Sea; Ebro Delta, Els Elfacs .. 1643

inflow (More at FLOW ...)

information management (See also data management; more at COMMUNICATIONS ...)

information systems: geographic
workshop; U.S., S, Florida and Georgia; Trichechus, manatus; habitats, managing; environmental management; manatees 1630
remote sensing; integration 1716

infrared imagery (More at IMAGERY ...)

infrared radiation (More at RADIATION ...)

ingestion: debris
Florida; manatees; Trichechus, manatus 2838

ingestion: particle
measurement; Protista, in; comment, cautions 916

Ingolfiellidea
new species; Tenerife, and Hierro; Amphipoda; interstitial fauna 2824

inlets: tidal
shoreline dynamics; stability studies 2025

Inner Moray Firth
implications of Mesozoic-Recent development; U.K.; sedimentary basins 3137

inorganic carbon
total dissolved; analytical system for accurate, continuous measurement 2556

insecticides
HCH, fate; India, S; coastal zone 809

insolation (More at solar radiation ...)
Arabian Sea, over; monsoons, SW, during; irradiance ... 736
values; Miocene, Late, since; climate, past 10 myr; radiation, solar 1903

instability
parametric; fluid dynamics ... 119
Rayleigh-Taylor; waves, singularities ... 1836
instability: baroclinic
circulation, gyre-driven; eddies, scales, resolution of ... 8
tropical storms, formation ... 759
radiation-induced; fluid dynamics ... 1247
air-sea interactions; heat exchange ... 1273
linear; fluid dynamics; Ekman dissipation, and sloping boundaries ... 2945
instability: barotropic
fluid dynamics; bifurcations in a low-order model with self-interaction ... 1243
instability: gravitational
fluid dynamics; stratification; embedded layer of low-viscosity fluid ... 123
Black Sea Current ... 1148
institutions: research
linking; online databases; Internet, sharing data over ... 1718
instrumentation
humidity, intelligent chilled mirror humidity instrument; buoys, ships, for use on ... 733
imaging systems reviewed; remote sensing, high-resolution, optical and acoustic; underwater exploration ... 1062
surface and water column; remote sensing; oceanographic research; current and future observing systems ... 1072
ocean engineering; offshore technology; overview articles; 11 papers ... 1077
history; salinometers; CTD sensors ... 1106
comparisons; currents, velocity data ... 1138
currents, measurement capabilities ... 1139
comparison; current meters, acoustic Doppler ... 1142
bottom boundary layer, processes; seabed, measurements at submersible; odor plumes; chemical sensors ... 1304
laboratory equipment, products and services; 1991-92 Labguide ... 1312
systems; data telemetry; recent developments at Woods Hole Oceanographic Institution ... 1715
and observational systems; atmospheric research; oceanography; national facilities and needs ... 1720
POGO; currents, volume transport; measuring mean velocities 1811
underwater recorder as navigation aid for RAFOS floats; sound field, oceanic sources; acoustics ... 1867
packages; data telemetry, long-range; frequency-agile HF packet-switching protocols ... 2893
instrumentation: aircraft
Long Island Sound; gravity field, measurements ... 2114
instrumentation: expendable
temperature, and depth corrections ... 3228
instrumentation: microwave
satellites, ERS-1 ... 1049
Integrated Global Ocean Station System (Use IGOSS)
interfaces (See also air-sea- and sediment-water interfaces; more at ATMOSPHERE, FRONTS, GRADIENTS, LAYERS, OCEAN, SEDIMENTS, STRUCTURE, ZONES ...)
interferometry
VLBI measurements; glacial isostasy, effects ... 858
very long baseline; plate motions; U.S. report to IUGG ... 867
interglacial climate
conditions; Antarctica; McMurdo Sound; basin sedimentation; resultant facies distribution ... 2048
interglacial shorelines
Australia; review ... 2027
interglacials
age of last one; corals, age; dating, U/Th ... 3071
interleaving: diffusive
double; Equator ... 112
internal gravity waves
spectral modelling ... 1194
frontal zones; numerical modelling ... 1197
internal solitons
sound waves; acoustics, resonant interactions in the coastal zone ... 1874
internal swash
Sulu Sea; solitary waves, associated with ... 698
internal tidal bores
upwelling; larval transport ... 452
internal tides
straits; modelling stationary internal disturbances ... 75
Indian Ocean; barotropic waves, internal ... 76
Japan, N, Sanriku coast; internal waves ... 1196
Canada; Laurentian Channel, variability in ... 1198
in axially symmetrical basin ... 2453
effects; China; Huanghai Sea, N; currents, tidal, vertical structure ... 2455
Internal Wave Experiment (Use IWEX)
internal waves (More at WAVES ...)
models; wave damping, incorporation ... 74
2-D propagation ... 77
trapped, tide-driven; seamounts, large (Fieberling Guyot); flow, over ... 699
speeds; two-layer hydraulics ... 1193
universality and diversity in spectra ... 1195
Japan, N, Sanriku coast; internal tides ... 1196
weakly nonlinear; evaluating the modulation instability parameters ... 1838
seabed, shelf; interactions ... 1839
spatial structure; stratified fluids ... 1840
scattering; bottom topography, periodic ... 1841
manifestations; surface, at; surfactants, presence; films, presence ... 1842
packets; Arctic Ocean; ice flexure ... 1844
turbulence, microscale, intensification ... 1881
Arctic Ocean; finestructure, velocity ... 2451
vorticity; interactions in strongly stratified flows ... 2452
stratified fluids; Green's function and point sources ... 2454
vorticity, potential; fluid dynamics, Hamiltonian ... 2943
International Association of Seismology and Physics of the Earth's Interior (Use IASPEI)
International Association for Physical Sciences of the Ocean (Use IAPSO)
International Association of Volcanology and Chemistry of the Earth's Interior (Use IAVCEI)
International Association of Marine Science Libraries and Information Centers
European Aquatic Sciences Libraries and Information Centres, as regional section; international organizations; 13 papers; French and English ... 581
brief history; French and English ... 582
International Council for the Exploration of the Sea (Use ICES)
International Council of Scientific Unions (Use ICSU)
International Decade of Ocean Exploration (Use IDOE)
International Geophysical Year (Use IGY)
international law
seafloor, use and misuse; deep-sea resources; waste disposal ... 2364
toxic chemicals; shipping liability; carriage of hazardous and noxious substances; development of a liability regime . 2878
international organizations
European Aquatic Sciences Libraries and Information Centres, as regional section; International Association of Marine Science Libraries and Information Centers; 13 papers; French and English ... 581
International Phase of Ocean Drilling (Use IPOD)
International Union of Geodesy and Geophysics
U.S., reports; collection of reviews of U.S. research efforts; 107 reports ... 1073
International Whaling Commission
workshop results; Cetacea; mortalities, incidental to fishing; fishing nets, and traps; report ... 1099
Internet
sharing data over; online databases; research institutions, linking ... 1718
interphyletic communication (More at COMMUNICATION ...)
interstitial fauna (See also psammon; more at FAUNA ...)
Tenerife, and Hierro; Amphipoda; Ingolfiellidea, new species ... 2824
interstitial water (More at WATER ...)
natural waters, marine; carbon, DOC stable isotope ratios .. 167
flow; sediments; waves, effects; oxygen, benthic fluxes 202
intertidal; North Sea; microbial mats, influence; metals, heavy, gradients ... 2766
interstitial water samplers (More at SAMPLERS ...)
intertidal communities (More at COMMUNITIES ...)
structure; nutrients; guano, seabird, variable consequences of 2253
intertidal fauna
mussel beds; amensalism or amelioration? ... 464
intertidal habitats
vegetated; nekton, collection via flume weir ... 1627
intertidal macroalgae
South Africa, E Cape shore; community succession ... 2715

intertidal macrobenthos
and subtidal; biological disturbance, and physical; relative significance of disturbances 2239
intertidal meiofauna
Iceland; sand beaches 473
intertidal mudbanks
role; Papua New Guinea, Fly Delta; nutrients, particulate and dissolved, diagenesis and export 208
intertidal mussel beds
Wadden Sea, and Scheldt Estuary; Netherlands; estuarine nutrients, influence on 483
intertidal sediments
Netherlands; Wadden Sea; denitrificationates, and nitrous oxide fluxes 222
meiofauna, abundance, short-term changes 463
oil pollution, estuarine; long-term chemical assessments 805
U.K.; Wales, Dyfi Estuary; tidal bedding, and cyclicities .. 2037
Korea, SW coast; mud flats, macrotidal 2044
Polychaeta; Arenicola, marina, burrows; bacteria, impact on 2733
intertidal zonation
Anomura; Petrolisthes, spp., distribution 512
intertidal zone
U.K.; Somerset, Berrow Flats; diatoms, epipelic, seasonal changes 1024
California; infauna, distribution; macroalgae, seasonal blooms, effects of 1636
rocky; New England; predation, strong or weak?; generalizing from experiments 2203
Argentina, Santa Elena shoal; endolithic fauna; substrates, characteristics, relationship to 2704
sediments; Blastobacter, sp.; bacteria, denitrifying 2730
Korea, near Kunsan; Yellow Sea; bacteria, heterotrophic, seasonal distribution and character 2751
Intertropical Convergence Zone (Use ITCZ)
intestinal tracts
sediment in; biomonitoring, programs; error, potentially serious source of 2325
intragenomic selection (More at SELECTION ...)
introduced species
test of criteria; Isopoda; Synidotea, laevidorsalis, global invasion by 1004
intrusions (More at FRONTS...)
structure of the head zone; stratified fluids, stably- 1875
intrusions: density
Washington State; Puget Sound; circulation 1130
invasions: biological
North Pacific, NE, coastal marshes; Gastropoda; snails, native vs introduced, interactions 1577
Arctic Ocean, trans-; Bering Strait, submergence 3.5 Ma, following; fossil record; biogeography 2112
Northern Hemisphere; Southern Hemisphere; fossil record; biotic interchanges; consequences 2202
invasions: species
biota, exchanges among; episodes of past (fossil record) interchange, implications for the future 920
invertebrate colonies
size, shape effects; Ascidiacea; Didemnum, moseleyi; rates of fission, fusion, growth, mortality 996
invertebrate larvae
forms; functional constraints on evolution 1579
invertebrate populations
natural; genetic variation, high levels 2269
invertebrates
contaminants, metal; cytological detoxification; micro-analytical applications reviewed 561
benthic; North America; Arctic Ocean, shelf; shelf communities; benthic ecology 2242
marine; aggression, discriminatory, evolution of 2267
marine families; speciation; extinction; probabilities of origination, persistence, extinction 2338
C and N isotopic compositions; Weddell Sea; feeding, diversity, implications for 2692
invertebrates: benthic
South Africa, Berg River Estuary; distribution, abundance, productivity 977
mega-, assemblages; North Atlantic, NW; Georges Bank, scallop grounds; environmental factors affecting faunas ... 984
invertebrates: colonial
Didemnum, moseleyi; reproduction, sexual vs asexual and density of neighbors 997
invertebrates: sessile
recruitment, community; larval settlement, and survival ... 976
Australia, S, Gulf of St. Vincent; communities, effect of patch size 3165
iodine
species; seawater, determinations in 2557
ion chromatography
twenty years' history reviewed 1311
ions
fractionation; seawater; surface layer 1955
Iphimediidae
and similar families, revision; Amphipoda, gammarid 507
IPOD (See also DSDP, JOIDES ...)
Ireland
shelf fronts; satellite and field observations 36
Tertiary, Late; Porcupine Basin; sediments, slump structures 1397
Cork Harbour; sediments; shellfish; heavy metals; baseline 2314
Irish Sea
coastal sediments; neptunium 194
iron
oxyhydroxides, hydrothermal, by; seawater; phosphorus, scavenging of; arsenic, scavenging of; inter-ocean variations 188
dissolved, distribution at sub-mm resolution; sediments, pore waters 1345
Black Sea, geochemical relationships; sediments; sulfur; carbon, organic 1387
dissolved; hydrothermal plumes; manganese, dissolved; in-situ chemical mapping 1409
sources; Pacific, pelagic; phytoplankton; report 1602
deficiency, by; North Pacific, subarctic; phytoplankton growth, limited 2218
phytoplankton, uptake by; nitrates; rebuttal 2669
Pacific, equatorial; plankton, nutrition; nitrogen 2690
seawater; bacterial corrosion 3044
iron: atmospheric
deposition; North Pacific; primary production; phytoplankton, responses 955
iron: colloidal
photolysis; effects on chemical lability 1316
iron colloids
oxyhydroxides; photochemistry; seawater, in 2563
iron fertilization
atmospheric carbon dioxide, possible effects on 794
Southern Ocean; global warming; Geritol fix refuted 1754
iron oxides
by; diatom frustules, dissolution enhanced 1451
irradiance (More at RADIATION ...)
net solar; surface; climate, variability, and 1982-83 El Niño; global monitoring 127
Arabian Sea, over; insolation; monsoons, SW, during 736
surface solar; radiation budget, global; spatiotemporal variability 1256
measurements; seawater optics; absorption and scattering estimates 1257
high, responses to; Asterionella, formosa; diatoms, spring maximum, decline of 1697
irrigation
Eurasia; Aral Sea, drastically reduced water levels due to heavy demands on tributaries; history, consequences 1101
island<s> (See also atolls, COASTS; more at LITHOSPHERE ...)
island arc<s> (More at ARCS ...)
island arcs
beneath; North Pacific, W; seismic tomography, imaging; subducted lithosphere 1559
Pacific; Solomon Islands; Vanuatu; petroleum potential 1564
island biogeography
a systems dynamics model 1583
islands
oceanic; igneous rocks; petrology 393
seamounts; sound, refraction; acoustics 716
on; waves, combined refraction-diffraction; numerical model . 1181
as oceanic dipsticks; Pacific, examples from; carbonate platforms, mid-oceanic; seamounts 1378
mantle, sources, the Hf-isotope connection; mid-ocean ridges; volcanic arcs 1548

tracing their basic roots; Caribbean Sea 1756
EEZs; South Pacific, SW equatorial; manganese nodules . 3139
islands: artificial
offshore; development, implications, applications; report 2353
islands: barrier
and spits, migration; Canada, SE; Beaufort Sea 255
isochrons
calculating; chronostratigraphy; dating; precision of age measurements by Rb-Sr isochrons 2010
Isognomon
californicum; Hawaii; Bivalvia; cadmium, bioaccumulation 564
Isopoda
cryptoniscid; Australia; Carpentaria: Gulf of; larval migration and advection 518
Acanthaspidiidae; revision 1001
cirolanid; Yucatan Peninsula, off; North Atlantic, SW; Bathynomus, giganteus, biology 1002
Synidotea, laevidorsalis, global invasion by; introduced species, test of criteria 1004
sphaeromatid; Asia, SE, coast; Paracilicaea, 2 n.spp. 1007
4 n.spp.; British West Indies; Pine Cay 1680
British West Indies; Pine Cay; Armadilloniscus, steptus n.sp. 1685
anthuridean; Colombia, Caribbean coast; Skuphonura, kensleyi n.sp. 2274
isopycnal diffusivity
Sargasso Sea 108
isostasy (More at SEA LEVEL, TECTONICS ...)
compensation; Mid-Atlantic Ridge; tectonics, features ... 351
isostasy: glacial
effects; interferometry, VLBI measurements 858
isotope paleontology
calcareous biota; growth and composition of extant species .. 2113
isotopic analysis
compounds, individual 2971
Israel
Haifa Bay; Echinodermata; trace elements, distribution; baseline 1037
N; Pleistocene, Late; Mediterranean Sea; shelf sediments; origin of submerged marine terraces 1396
coast; Mediterranean Sea, E; Scyphomedusae, including 2 Lessepsian migrants 3180
Istanbul
Turkey; Marmara: Sea of; seismicity, long-term 2636
Italy
Emilia-Romagna coast; Po River, Delta; coastal sediments; cesium, -137, distribution 270
Tuscany-Latium shelf; shelf; crust, seismic surveys; geodynamic implications 350
Aeolian Islandse of; volcanic gases, submarine exhalations; geochemical investigations 385
S, Taranto; Mar Piccolo; algae; reassessment 529
Olbia Bay; sediments; trace metals 808
Messina: Strait of; margin tectonics, recent 2125
W of Naples; Campi Flegrei; volcanism; calderas; collection 2144
Venice Lagoon; sediments, and resuspended sediments; carbon, organic; nitrogen, organic; PCBs, contamination, relation with 3038
ITCZ
atmospheric circulation, Hadley; potential vorticity modelling 148
IWC (Use International Whaling Commission)
Izu Peninsula
off, 1989; Japan; volcanic eruptions, ejecta and eruption mechanisms; seamounts, submarine volcanism 396
in and around; seismicity; volcanism; tectonics, implications 2127
Philippine Sea Plate, bending accelerated; crustal deformation, contemporary 3085
Izu-Bonin Arc
Sumisu Rift, structural development; arc tectonics 1557
forearc; Aoga Shima Canyon; submarine canyons, development 2019

Jamaica
Discovery Bay; sediments, seismic stratigraphy 314
Kingston, off; Ciliata, aloricate; biomass, and abundance ... 1686
wetlands; environmental management; development and degradation, redevelopment and preservation 3251
Jan Mayen
island; Mid-Atlantic Ridge, N; seismicity; volcanism ... 2632
Japan
Tsushima Current, nearshore branch structure, summer; currents 30
Kagoshima Bay; tidal harmonics; numerical study 43
S of; solar radiation; in-situ measurements 128
Tokyo Bay; Funka Bay; coastal sediments; uranium .. 197
Suruga Trough; turbidite sediments; variations in C-14 ages of organic fractions 295
Izu Peninsula, off, 1989; volcanic eruptions, ejecta and eruption mechanisms; seamounts, submarine volcanism . 396
Suruga Bay, photographic observations; Ophiuroidea, deep-sea infaunal 465
algae, marine, checklist (revised 1990); in Japanese 537
Pleistocene, Late; Holocene; sea level, changes; tectonics, implications for; mantle rheology 864
Urakawa-Oki; earthquakes, seismic quiescence prior to 904
Nabeta Bay; sessile biota; community structure, temporal changes in; succession 974
off; Shikoku Basin; basin circulation, mid-depth 1135
around; storm surges; typhoons, induced by; in Japanese, English abstract 1184
N, Sanriku coast; internal tides; internal waves 1196
Osaka Bay; particle aggregates, large amorphous; nature and distribution 1331
Seto Inland Sea; heavy metals, transport 1354
region; magnetic field, anomalies, map; tectonics, implications 1458
Mount Fuji; Hakone Volcano; volcanoes 1495
NE, off; Sanriku; earthquakes, spatial distribution in 1989 .. 1542
NW; Sanriku, off; macrobenthic communities, deep-sea; seasonal variations 1640
in; squid, resources; cuttlefish, resources 1735
environmental politics 1738
Hiuchi-Nada; density stratification; roles of horizontal processes in formation 1886
Ibaraki and Aomori coasts; radionuclides, Pu-239, -240, and Cs-137; biota, marine 1960
Tertiary; Japan: Sea of, opening, in reference to; sedimentary basins, evolution 2096
Seto Inland Sea; Amphipoda; Melita, 2 n.spp. 2295
tsunamis, abnormal; earthquakes, Torishima 1984 2445
Mesozoic, accretionary complex, example; seamounts; subduction; melanges, large-scale formation 3090
East African Rift; rifting, active mechanism; continents, breakup; backarc spreading 3097
shallow submarine Shirahama Group; pyroclastic debris flows; paleomagnetic evidence 3110
NE waters; bacteria, oil-degrading, distribution; petroleum biodegradation, potential 3220
Japan Arc
NE; subduction zones; magnetic data, modelled 340
crust, deep structure; seismicity; volcanism; relationships .. 889
Japan: Sea of
tsunamis, 1983; spectral characteristics 49
Korea Plateau slope; sediment failures 265
Yamato Basin; crust, P- and S-wave velocity structure 402
earthquakes, 1983; crustal deformation, pre- and post-seismic 412
mantle, uppermost; P-wave velocity 422
Seto Inland Sea; Bering Sea; North Pacific, W; molybdenum, dissolved, distribution 1314
sediments; rare earths; cerium, diagenetic behavior 1398
past 85 kyr; paleoceanography 1437
opening, implications for; Miocene, Early; paleomagnetism, in the Kani group in SW Japan; tectonics 1457
implications for the opening mode; Tsushima Strait, area; paleomagnetism, and fission track geochronology; tectonics 1460
Toyama Bay; Copepoda; zooplankton, vertical distribution 1594
tritium; circulation tracers; deep water renewal time 1791
Amur Gulf, Razdolnaya Estuary; organic matter, dissolved; biogeochemical behavior 1968
opening, in reference to; Tertiary; Japan; sedimentary basins, evolution 2096
1983; earthquakes, aftershock source characteristics 2162
ferromanganese crusts, geochemistry 2190

Japan Trench
across, at 40°N; crust, upper, structure; seismic data 2166
inner slope; crust, seismic 2177
Java Sea
Scleractinia; Fungiidae; coral bleaching; stress, tolerance, and interference by life history strategy 1639
Jeanne d'Arc Basin
Canada, offshore; lithospheric heat flow; crust 1472
Jerlov meter (More at METERS ...)
jet drops (More at DROPS ...)
jets (More at CURRENTS ...)
midlatitude, separation; currents; influence of model boundary conditions 1798
jets: atmospheric
coastal; South Carolina, coast 1922
jets: current
California, N, off; coastal zone, transition area, dynamics; nonlinear finite amplitude behavior 651
coastal; California, N, off; linear stability analysis of the coastal transition zone jet 661
by; eddy entrainment 724
California, off Point Arena; Copepoda; Eucalanus, californicus, jet role in aspects of secondary production 1011
meanders, evolution; vorticity fronts, along 1156
particle-laden, from; sound scattering; acoustics 1863
California, N, off; phytoplankton; biomass transport; cool filament chemical and biological structure 3255
jets: frontal
California, N, off; currents; coastal zone, transition, structure 671
Jiaozhou Bay
China; seawater; phytoplankton; mercury, concentrations, distributions; in Chinese, English abstract 231
jittered sampling
spectral analysis 2348
JOIDES (See also DSDP, IPOD ...)
Joint Air-Sea Interaction Experiment (Use JASIN)
Joint Oceanographic Institutions for Deep Earth Sampling (Use JOIDES)
Joint U.S./U.S.S.R. Mid-Ocean Dynamics Experiment (Use POLYMODE)
Jordan
beaches; Aqaba; Gulf of; macrobenthic communities; seasonal variation in community structure 3167
journals
Atoll Research Bulletin; contents list and indexes 2351
journals: scientific
libraries; serials, financial control of; problem of increasing costs; French and English 605
publishing; libraries; increasing numbers, increasing costs; French and English 606
publishing; Continental Shelf Research; review 2373
Juan de Fuca Plate
Oregon, S, beneath; seismic tomography; lithosphere ... 2645
Juan de Fuca Ridge
North Pacific; sediments, hemipelagic; hydrothermalism; interactions 302
near; hydrothermalism, manifestations; metalliferous sediments 303
Cleft segment geology; North Pacific, NE; seafloor spreading; lava, recent flows; hydrothermal plumes, mega- 873
hydrothermal deposits; sulfides, massive, radial growth rates and Pb-210 ages 1411
West Valley segment; North Pacific, NE; magma mixing; mantle, heterogeneous, evidence for 1560
S; hydrothermal vents, near; flow, mid-depth oceanic 2600
hydrothermalism, evolution of activity; observations, mineral ages, Ra isotope ratios 3066
Cobb Offset; rifting, propagation history, constraints on; tectonics 3092
Gorda Ridge; basalts, MORB, geochronology and petrogenesis 3102
Juan de Fuca Rift
zone; North Pacific, NE; hydrothermalism; radon, in bottom waters 305
Jurassic
Late, since; South Atlantic, evolution; plate tectonics 365
Late; Cretaceous, Early; epeiric seas, and oceans; fossil record; nannoconids as paramount environmental recorders; in French, English abstract 1445
Lower; North Sea, Beryl Embayment; sediments, coastal plain and fan delta, evolution 2590

Kagoshima Bay
Japan; tidal harmonics; numerical study 43
Kamchatka
North Pacific, NW; volcanics, alkali, subalkaline, origin of . 394
SW shelf; hydrophysical surveys 1276
and Paramushir Island, off; Okhotsk: Sea of; gas hydrates; sediments 1399
Kurile Islands; subduction, of sediment layers; lava, Be-10 levels 1507
off; metals, transition; zoobenthos; gas hydrates, seeps ... 1703
Kamchatka Peninsula
off, Karaginskiy Island; tectonics 1479
Kane Fracture Zone
North Atlantic, central; basement, depth to; geoid, expression 2116
Kattegat
Kiel Bight; Baltic Sea, area; dissolved oxygen, fluxes; effect of inflows on deep-water oxygen conditions 204
Skagerrak; Chrysochromulina, polylepis; picoplankton blooms, May-June 1988; environmental conditions, possible causes, effects; ICES workshop report 949
Skagerrak; circulation; oceanography over the past 8000 yr . 1436
North Sea; Cetacea, spp.; Phocoena, phocoena; mercury, contamination 2322
kelp (More at ALGAE ...)
Nova Scotia; Polysiphonia, lanosa; ecology, distribution .. 2304
giant, influence of; Macrocystis, pyrifera; bacterial growth, subantarctic 3175
kelp communities
macrophytes, canopies, beneath; benthic suspension feeders; effects of understory kelps on faunal growth rates and survival 1635
long-term stability; Strongylocentrotus, franciscanus; sea urchins; El Niño, ENSO events; relationships 2714
North Atlantic; Laminaria, longicruris, refugial role; sea urchins, reduction in grazing 2829
Kelvin waves
nonlinear generation 1186
coastal; topography, slowly-varying 2429
Kenya
Samburu Hills; East African Rift, System; basalts, chemistry, secular variations; volcanism; asthenosphere, upwelling 391
Gregory Rift; asthenospheric upwelling, intermittent; basalts, composition, dates 1505
East African Rift, beneath; crust; mantle, upper; seismic imaging 2643
East African Rift, System; lithosphere, structure, large-scale variation; continental rifts 2647
Kerguelen Archipelago
around; Southern Ocean; ichthyoplankton, influences on distribution 445
Kerguelen Island
and Heard Island, near, autumn of 1987; Southern Ocean; fronts, south polar front 1815
keystone species
mangrove forests, dynamics; productivity; nutrients, soil; crabs, burrowing, influence 2254
Kiel Bay
German Bight; nutrients, N, P; plankton; hypoxic water, conditions 577
Kiel Bight
Kattegat; Baltic Sea, area; dissolved oxygen, fluxes; effect of inflows on deep-water oxygen conditions 204
Baltic Sea; coastal sediments; denitrification; in German, English abstract 221
Baltic Sea; sedimentation, rate, effects on; fecal pellets; food, supply, in relation to 2233
near-bottom; Baltic Sea, W; bacteria, seasonal variation in activity 2729
Baltic Sea; eutrophication; sediment denitrification ... 2741
central; Baltic Sea; bacteria, number, production, activity; annual variations 2744
Kilauea
Hawaii; submarine lava, degassing history 379

Hawaii; mantle, secrets of the; volcanic glasses; report ... 2381
active crater; Hawaii; tritium, concentrations; cold fusion, no evidence for ... 2634
Hawaii; Mauna Loa; basalts, tholeiitic; volcanism; magma, primary, source ... 3111
kinetic energy
equipartition; plate tectonics ... 2137
King George Island
Southern Ocean; Amphipoda, emphasized; benthic fauna; in German, English abstract ... 3170
Knight Inlet
British Columbia; sediment porosity; determinations using a transient electromagnetic system ... 1388
Kolbeinsey Ridge
Norwegian Sea; Greenland Sea; Vesterisbank Volcano; Polarstern investigations of sediments, bathymetry; in German, English abstract ... 3235
Kolmogorov: A. N.
turbulence; stochastic processes; special issue celebrating his work; 16 papers ... 726
history of science; personal reminiscence ... 2882
history of science; reminiscences ... 2883
Kolmogorov spectrum
and its oceanic cousins; turbulence; review ... 722
Komandorskiy Basin
Shirshov Ridge; seafloor spreading; crust, structure ... 355
Korea
W coast, Gunhung Bay; Quaternary, Late; bay sediments; shallow seismic stratigraphy, distribution pattern ... 298
SW coast; mud flats, macrotidal; intertidal sediments ... 2044
W Korea Bay Basin; oil, source rock potential; hydrocarbons 2188
South Sea; seawater; currents; temperature, variations; in In Korean, English abstract ... 2403
southern sea; seawater; currents; physical processes influencing chlorophyll, nutrient distributions ... 2408
off; water masses, Ullung Warm Lens ... 2420
off; Ullung Warm Lens; water masses; spatiotemporal characteristics ... 2421
off; Ulleung Basin; hydrographic surveys; physical properties ... 2422
seas around; storm surges ... 2442
Masan Bay; phytoplankton, populations, variability ... 2687
southern seas; water masses, relation to; phytoplankton, distribution, composition; in In Korean, English abstract .. 2688
Chonsu Bay; zooplankton, seasonal variation and production 2694
Chonsu Bay; nannoplankton, communities, dynamics and productivity; in In Korean, English abstract ... 2695
near Kunsan; Yellow Sea; bacteria, heterotrophic, seasonal distribution and character; intertidal zone ... 2751
Krafla
Iceland; crust; volcanism ... 3122
Krakatau
1883; volcanic eruptions ... 1504
KREEP (Use basalts: KREEP)
krill (More at SHELLFISH ...)
Antarctic Peninsula; ecosystems; plankton; Project RACER overview ... 1576
distribution and population structures of immature and adult krill; Antarctic Peninsula; Bransfield Strait, region; Euphausia, superba ... 1673
development rates and habitat shifts; Antarctic Peninsula; Bransfield Strait, region; Euphausia, crystallorophias . 1674
Antarctic, morphological and biochemical differentiation; Euphausia, superba; Thysanoessa, macrura; multivariate approach ... 1675
growth and early development, mesoscale variation; Antarctic Peninsula; Bransfield Strait, region; Euphausia, superba ... 1678
Antarctic Peninsula; Bransfield Strait, and Gerlache Strait; Drake Passage; Euphausia, superba; depth relationships of eggs, larvae and adults ... 1684
Antarctic, abundance; Southern Ocean; acoustic measurements ... 1748
post-larval, distribution and abundance; Antarctica; Prydz Bay, in summer; Euphausia, superba ... 2219
South Atlantic, W, activity in; commercial fishing ... 2873
krill larvae
distribution; Antarctica, waters around; Euphausiacea 1683
Krka River
and Estuary; Yugoslavia; arsenic; selenium ... 1995
Kurile Arc
earthquakes; seismicity; shear waves; travel time, amplitude, waveform analysis ... 901
islands, beneath; crust; mantle, upper; structure and composition ... 2182
Kurile Basin
origin; Okhotsk: Sea of ... 2173
Kurile Islands
Kamchatka; subduction, of sediment layers; lava, Be-10 levels ... 1507
Kuroshio
branch current; Taiwan, N of; currents ... 24
Extension; currents, energetics ... 26
Current, across; Foraminifera, planktonic assemblages, June 1989; in English abstract, Chinese ... 528
current transport; estimates using an inverse technique ... 652
NE of Taiwan; East China Sea; chemical hydrography; variability in the frontal region ... 777
Extension; currents, mean flow and variability; remote sensing, data ... 1809
at eddy boundaries; primary production; oxygen, supersaturation ... 2225
East China Sea; alkalinity, surface distribution; water masses, tracing, applications to ... 2564
Kuwait
Al Ahmadi, as origin; India, response, concerns; oil spills ... 2363

laboratory equipment
products and services; instrumentation; 1991-92 Labguide .. 1312
Labrador
Newfoundland; shelf macrofauna; functional approach to studies ... 2244
Labrador Sea
Quaternary, Late; carbon, organic, cycles; productivity, paleo- ... 1440
passive margins; magnetic field, anomalies, contrast ... 1456
Greenland Sea; margin; crust, structure; new seismic data . 1514
Laccadive Sea
India, SW coast; Cyclopoida, ecology ... 2821
lagoon<s> (More at COASTS ...)
lagoon communities (More at COMMUNITIES ...)
lagoons: coal ash
Hong Kong; environmental monitoring; an 'oyster watch' monitor ... 1028
lagoons: coastal
India, Laccadive Islands; zooplankton, diel patterns and emergence ... 1600
lagoons: deltaic
nutrients, profiles; pore water; benthic fluxes ... 1975
Lagrangian circulation
fluid dynamics; oscillatory flow ... 125
Iberian Peninsula; North Atlantic, E; coastal zone, transition; currentsbservations ... 639
Laguna Madre
hypersaline lagoon; Texas; bacterioplankton, abundance and production dynamics; seagrass communities ... 927
Lake Baikal
Russia; hydrothermal vents; lithospheric heat flow 3060
Lake Tanganyika
Quaternary, Late; Africa, East; sediments; paleomagnetism, oscillations, chronological potential ... 2119
Lakshadweep
Arabian Sea; seagrass beds; habitats, complexity; macroinvertebrates, abundance; coral atolls ... 2705
laminar micrite crusts
Red Sea; reefs, foreslope processes ... 1374
Laminaria
longicruris, refugial role; North Atlantic; kelp communities; sea urchins, reduction in grazing ... 2829
lamprophyric volcanism
Cenozoic; Atlantic; Sierra Leone Rise; tectonics; implications for regional tectonics and stratigraphic time scale ... 1499
Lancaster Sound
Arctic area; sea ice; climate, measurement of state variables 2919
land
masses, width of; sea breezes; relationship ... 1287

seas; ecological theory, and research; time to cross the boundary ... 3225
land breezes (More at BREEZES ...)
land-sea interface
California, Tomales Bay; ecosystem heterotrophy; metabolism; C-N-P stoichiometry ... 1333
landslides
as caused; California, Loma Prieta 1989; Moss Landing, Harbor; waves, short-period, generation; earthquakes, as ultimate cause ... 687
Langmuir circulation (More at CIRCULATION ...)
Laptev Sea
Arctic area; shelf, structure ... 1530
larvae: fish
growth; North Sea; Clupea, harengus (herring); regional and seasonal differences from otolith analysis ... 962
larvae: invertebrate
forms; functional constraints on evolution ... 1579
larvae: krill
distribution; Antarctica, waters around; Euphausiacea ... 1683
larval fish
Antarctic Peninsula; Bransfield Strait; distribution and abundance ... 1599
larval recruitment
coral communities; geographically specific recruitment and postsettlement mortality ... 983
abundance, settlement, juvenile mortality; Didemnum, candidum; effects on depth distribution of this colonial ascidian ... 1670
and settlement; Cirripedia, population structure; influence of larval supply ... 2286
larval samplers
traps, cylindrical tube traps ... 3146
larval settlement
and survival; sessile invertebrates; recruitment, community 976
factors affecting initial settlement ... 1644
larval transport
internal tidal bores; upwelling ... 452
laser sounding
water column, upper ocean; dispersive distortion of return pulses ... 1761
latent heat flux
satellite data, climatological studies ... 2947
laterites (More at SEDIMENTS ...)
Lau Basin
Valu Fa Ridge; magmatism, subalkaline andesite; spreading centers; chemistry, petrogenesis ... 1508
beneath; seismic waves; mantle; subduction zones; P-wave velocity anomalies ... 2149
tectonic environment; South Pacific, W; hydrothermal deposits; geochemistry ... 3062
Laurentian Channel
variability in; Canada; internal tides ... 1198
lava (More at BASALTS ...)
geochemistry; Sulawesi, NE; Quaternary; magma, source chemistry; volcanic rocks ... 392
recent flows; North Pacific, NE; Juan de Fuca Ridge, Cleft segment geology; seafloor spreading; hydrothermal plumes, mega- ... 873
Be-10 levels; Kurile Islands; Kamchatka; subduction, of sediment layers ... 1507
largest flow on earth; Iceland, Lakagigar, 1783; volcanic eruptions; carbon dioxide, and sulfur degassing ... 3105
lava flows
submarine; seawater, -lava interactions ... 2147
lava: submarine
sulfur, low content; volcanism, subaerial, unreliable indicator of ... 377
degassing history; Hawaii; Kilauea ... 379
lavas
geochemistry; Philippines, Luzon; magma, multiple supply systems; mantle, heterogeneity ... 387
law (See also EEZ; more at GOVERNMENT, POLICY ...)
law: international
seafloor, use and misuse; deep-sea resources; waste disposal ... 2364
toxic chemicals; shipping liability; carriage of hazardous and noxious substances; development of a liability regime . 2878
Law of the Sea
hazardous waste; ocean dumping; transboundary movement ... 1736
layers (See also BOUNDARY LAYERS; FRONTS, GRADIENTS, INTERFACES, ZONES; more at ATMOSPHERE, LITHOSPHERE, OCEAN, SEDIMENTS ...)
leads: ice
sea; probable errors in width distributions ... 1847
pack; Antarctica; Southern Hemisphere, circulation sensitivity; ocean-atmosphere interactions ... 2933
Leeuwin Current
mesoscale structure; Australia; currents; laboratory models and satellite imagery compared ... 1158
driving forces; Australia; Pacific; currents; wind, and heating, role ... 1800
lenses
intrathermocline; acoustics, fields; eddies; interactions, effects 96
density; fluid dynamics; eddies ... 117
lenses: vortical
stratified fluids; fluid dynamics; lab investigations ... 1234
Lepidophthalmus
sinuensis n.sp.; Caribbean Sea, Colombian coast; Thalassinidea, callianassid; ecology, impact on commercial culture of penaeids ... 3224
Leptomedusae
Anthomedusae; Limnomedusae; Narcomedusae; Trachymedusae; medusae, distribution patterns ... 2795
Leptomysis
lingvura; Mysidacea; cadmium, sublethal effects; toxicities, to respiratory metabolism, nutrition, excretion, hydrolase activity ... 1034
Lessepsian migration
Red Sea; Mediterranean Sea; Suez Canal, as conduit; biogeography, continuous process ... 2667
Leuconidae
family revision; Cumacea ... 2825
liability: shipping
international law; toxic chemicals; carriage of hazardous and noxious substances; development of a liability regime . 2878
Lias
to present; Caribbean Sea; tectonics, geodynamic reconstructions; crust ... 371
libraries
scientific journals; serials, financial control of; problem of increasing costs; French and English ... 605
scientific journals; publishing; increasing numbers, increasing costs; French and English ... 606
Lichomolgidae
key to the genera; Great Barrier Reef; Scleractinia, associated with; Copepoda ... 2811
light (See also color, optical-, sunlight; more at RADIATION. For atmospheric and oceanic optical properties see also AIR, ATMOSPHERE, OCEAN, seawater, WATER ...)
atmosphere; color; optical phenomena; review collection; 23 papers ... 775
changing; primary production; microalgae, response ... 929
underwater; New Zealand; Manukau Harbor; water column ... 1215
attenuation profiles; Bivalvia; Tridacna, gigas shells, correlation in; temperature, stable oxygen isotope record ... 1375
absorption; yellow substance; fluorescence, induced, measurements ... 1589
intensity and spectra effects; Quaternary; Spitsbergen; sediment thermoluminescence, reduction; implications for dating sequences ... 2002
sun angle effects; benthic microalgae, intertidal; tides, stage, effects; productivity ... 2310
dependence; South China Sea, islands, sublittoral zone; Scleractinia, distribution ... 2794
polarized, detection; Stomatopoda, mantis shrimp; compound eyes, structure ... 2815
light field
underwater; natural waters; optical properties; volume scattering function, average cosines ... 702
light scattering
multiple; water column; angular distribution of the submarine light field ... 81
techniques; particle size analysis; applications, review ... 166
sunlight; seawater; bubbles, clouds; colors observed ... 703
light: ultraviolet
effects; Cryptomonas, maculata; flagellates; biochemical and spectroscopic analysis ... 2836
lignin
geochemistry; North America, coast and shelf; shelf sediments ... 2582

Ligurian Sea
Tunicata, mid-water; fronts, permanent; relations 1591
limestone<s> (More at CARBONATES ...)
Limnomedusae
Anthomedusae; Leptomedusae; Narcomedusae; Trachymedusae; medusae, distribution patterns 2795
Lion: Gulf of
Mediterranean Sea; sediments, mixing and accumulation rates 3056
lipids
sources of; sediments; isotopic analyses 299
storage products; Copepoda, benthic; Nile red as a probe 1574
terrestrial; South Atlantic, over; atmospheric aerosols; particulates 1946
microextraction method; biota, mesopelagic 1952
dissolved and suspended; North Pacific, and adjacent seas; surface, waters 1971
particulates; polysaccharides; amino acids; extraction, analysis 3017
sampling and analysis; particulates 3029
liquefaction: sediment
California; Moss Landing, onshore and offshore sediments; earthquakes, during the 1989 Loma Prieta quake 1526
liquefied natural gas (Use LNG)
liquid nitrogen (More at nitrogen ...)
liquids
fluid dynamics; gases; Boussinesq approximation, asymptotic aspects 1238
lithosphere (See also ARCS, BASINS, COASTS, CONTINENT-, CRUST, diapirs, domes, FAULTS, FLOOR, FRACTURES, geosynclines, hot spots, ISLANDS, PLATES, RIDGES, RIFTS, seamounts, SHELF, STRUCTURES, subduction zones, TECTONICS, trenches, triple junctions, volcanoes; more at EARTH ...)
remanent magnetization, thermo-; geomagnetic field, marine anomalies, source implications 332
oceanic, age; gravity, anomalies; relationship 335
thermal structure investigations; seafloor; electrical conductivity; ML soundings; in French, English abstract ... 346
3-D configuration; Pacific, western rim; subduction zones . 401
upper oceanic; crustal deformation, zone; microstructural evolution, DSDP Hole 504B 878
basal detachment; Mediterranean Sea, geodynamics; mantle, eastward flow; tectonics 882
oceanic; ophiolites; symposium papers; 8 papers 897
seismic anisotropy; subducting plates, above 903
imaging and understanding; Scandinavia; Iceland; crust; mantle; symposium 1513
subducting slabs, deep structure; mantle, penetration into; earthquakes, S-wave analysis 1523
lower, seismic models; Baltic Sea, S, beneath; crust; mantle, upper 1525
dynamics; Pliocene, to Quaternary; North Sea, S; basin subsidence 1535
continental, thickness; continental crust; mantle convection, second-scale, influence 1549
thermal, density heterogeneities; geoid, anomalies, and topography anomalies; gravity field 2115
Oregon, S, beneath; Juan de Fuca Plate; seismic tomography 2645
structure, large-scale variation; Kenya; East African Rift, System; continental rifts 2647
S-wave attenuation in; Crete: Sea of; Mediterranean Sea; crust, OBS observations 2648
dynamics; crust; plates; approach to modelling 2649
lithosphere: continental
extension; Ethiopia, Afar; tectonics, block rotation; comparison to oceanic microplate systems 348
mantle plumes; hotspots, and pre-existing thinspots 2655
lithosphere: subducted
thermal structure; seismicity, deep; earthquakes 1527
North Pacific, W; seismic tomography, imaging; island arcs, beneath 1559
lithosphere: subducting
Pacific; Tonga, slab, geometry and extent; tectonics 885
seismic imaging; trade-offs with deep path and near-receiver effects 902
lithospheric breakup
plates, work-hardening plastic, necking; tectonics; rifting .. 2627
lithospheric dynamics
mantle convection; geodynamic heating system description . 2185
lithospheric heat flow
North Pacific; Okinawa Trough 344
Middle American Trench, vicinity; new data 345
Bengal Fan; Indian Ocean, central; sediments, evidence for dewatering 859
Canada, offshore; Jeanne d'Arc Basin; crust 1472
variations; North Atlantic, E margin; Goban Spur; Galicia Bank 1474
constraints; South Pacific, superswell; lithospheric swells . 1475
Australia, NW, off; Exmouth Plateau; numerical model ... 1476
misconceptions; plate tectonics, delayed discovery? 1742
Costa Rica Rift; seismicity, lateral heterogeneities in seismic velocity; crust; DSDP site 504 2164
Lake Baikal; Russia; hydrothermal vents 3060
Caribbean Sea; Mexico: Gulf of; comments 3084
lithospheric plates
paleoplates; mantle, upper, buried in; subduction, cyclic character; tectonics 888
Peru-Chile Trench, studies in; curvature and elastic thickness relationships 1489
lithospheric stress
fields of the overriding plate; convergent margins; volcanic arcs, active 2131
sources of; tectonics 2133
from sublithospheric loading; plate boundaries, forces; tectonics 2150
nature and determination; crust 2160
earthquakes; seismological constraints 2176
nature, source, magnitude; tectonics 2178
thermoelastic; hotspots, reheating, due to; tectonics 2183
lithospheric swells
South Pacific, superswell; lithospheric heat flow, constraints 1475
lithostratigraphy
Cretaceous, Early to Mid-; North Sea, central; sediments . 2084
litter: plastic
marine; artificial substrates 551
litter: shoreline
Canada; Halifax Harbor 595
littoral biota (More at BIOTA ...)
littoral zone
morphological elements; Mediterranean Sea; Ebro Delta; in Spanish, English abstract 244
database; Europe, 11 countries; coastal erosion, problems .. 258
Mississippi, Old Fort Bayou; nekton communities, dynamics; river-estuarine gradient, along 2238
LNG (More at GAS ...)
lobsters (More at SHELLFISH ...)
locomotion
respiration, and cardiac activity; biota, simultaneous physiological and behavioral monitoring using non-invasive technique 914
Loma Prieta
1989; California; earthquakes; collection 2644
Long Island Sound
East River, effect of; barotropic flow, on 23
sediments; chlorophyll, early diagenesis; particulates 276
water quality; environmental impact, assessment 1731
gravity field, measurements; aircraft instrumentation 2114
estuaries, to; nutrients, export; watersheds, from 2570
long waves (More at WAVES ...)
surface; capillary waves, gravity-; effect of nonlinear damping on interactions 62
fluid dynamics; shear flow; solutions of the Burns condition 121
run-up; international workshop, report 692
Atlantic, tropical, 1984-1990; eddies 696
tidal, elevation; tidal transport; Green's law revisited 2436
propagation onto shelf 2915
Longhurst frame (More at OCEANOGRAPHIC APPARATUS ...)
longitudinal dispersion (More at DISPERSION ...)
longshore currents (More at CURRENTS ...)
lab studies, relevance to theory 25
beaches, bar and trough; numerical model 29
lab measurements 1814
Louisiana
Cyclopoida; Metacyclops, cushae n.sp. 2819
Love waves (More at WAVES ...)
luminescence (See also cathodoluminescence ...)
Luzon Arc
S; Philippines; arc petrogenesis; geochemisty, petrology .. 378
lysocline (More at GRADIENTS ...)

lysocline: calcite
modelling ... 1380

Macquarie Ridge
South Pacific; earthquakes, 1989; seismic waves, long-period, radiation; mantle, evidence for coseismic slip? ... 2637
macroalgae
plants, vascular; detritus, available and refractory nitrogen in 480
changes in biomass, species composition; Australia, Peel-Harvey Estuary; eutrophic estuaries ... 533
seasonal blooms, effects of; California; intertidal zone; infauna, distribution ... 1636
endemic; Antarctica; photosynthesis; respiration, dark; carbon fixation, light-independent ... 2306
distribution, as case history; ecological experiments, logic .. 2831
macroalgae: intertidal
South Africa, E Cape shore; community succession ... 2715
macroalgal decomposition
microbiota; meiofauna ... 535
macrobenthic communities
deep-sea; Japan, NW; Sanriku, off; seasonal variations ... 1640
recovery; sewage sludge; disposal sites, cessation of dumping ... 2328
effects on; petroleum production, activities; production water discharges ... 2329
Aqaba: Gulf of; Jordan, beaches; seasonal variation in community structure ... 3167
macrobenthos (More at BENTHOS ...)
structure and temporal variability of associations; Brazil, SE, Paranagua Bay; Spartina, alterniflora, influence of ... 987
accessible, may be marginal prey; shorebirds, waders ... 1647
zoo-, burrowing; sediments, major determinant of microbial presence in; bacteria ... 2762
macrobenthos: estuarine
organic matter, enrichment, effects ... 1638
macrobenthos: intertidal
and subtidal; biological disturbance, and physical; relative significance of disturbances ... 2239
Macrocheira
kaempferi, redescription; Brachyura; Majoidea, classification 2804
Macrocystis
pyrifera; bacterial growth, subantarctic; kelp, giant, influence of ... 3175
macrofauna (More at FAUNA ...)
effects on; sandy beaches; vehicular traffic, ORVs ... 1094
sulfides, biological tolerance of; sediments; vent communities ... 2207
macrofauna: benthic
California, Palos Verdes shelf; standing crop long-term dynamics ... 471
infaunal abundance; Natantia; Upogebia, pugettensis, effects 474
France, Bay of Saint-Brieuc; collection, settlement patterns, biotic interactions ... 476
Finland: Gulf of; hypoxia; effects of oxygen deficiency ... 1631
Newfoundland; Grand Bank, outer; community structure, spatial, post-mortem erosion of ... 2251
macrofauna: shelf
Labrador; Newfoundland; functional approach to studies . 2244
macrofaunal communities
Adriatic Sea, N; eutrophication, long-term effects ... 2840
macroinvertebrates (More at invertebrates ...)
associations; Mexico: Gulf of, N; beaches, barrier-island; important environmental relationships ... 982
reestablishment; marsh impoundments, restored; populations comparison ... 2243
abundance; Arabian Sea; Lakshadweep; seagrass beds; habitats, complexity; coral atolls ... 2705
India, W, Konkan; sediment communities; population dynamics, and community structure ... 2716
macrophytes (More at FLORA ...)
canopies, beneath; kelp communities; benthic suspension feeders; effects of understory kelps on faunal growth rates and survival ... 1635
macrophytes: aquatic
ecology; nature of scale and use of hierarchy theory ... 1020
carbohydrates, signatures, and dissolved degradation products; determinations ... 2308
macrophytes: submerged
ecology; collection; 11 papers ... 1019
macrozoobenthos
long-term changes; Adriatic Sea; Gdansk Deep; benthic communities ... 3223
macrozooplankton
influence of; particle flux, vertical ... 944
Antarctica, waters around; micronekton; community structure; sea ice, beneath ... 961
macrozooplankton fauna
Newfoundland; comparison in 2 fjords of different physical oceanography ... 948
Madagascar
Cretaceous; basalts, sources; volcanism; tracking oceanic and continental sources ... 1503
Madras
off; India; bacteria, heterotrophic ... 2759
maelstroms (More at vortices ...)
Magellan Strait
Amphipoda, ochlesid; Curidia, magellanica n.sp. ... 508
magma (More at IGNEOUS ...)
depth of origin; mantle, metasomatism; basalts, fluid and silicate glass inclusions; xenoliths, mafic, ultramafic 382
multiple supply systems; Philippines, Luzon; lavas, geochemistry; mantle, heterogeneity ... 387
source chemistry; Sulawesi, NE; Quaternary; lava, geochemistry; volcanic rocks ... 392
igneous rocks; toward a comprehensive classification ... 876
formation; mantle, upper, melting; new perspective ... 893
overpressure, role; earthquakes, suppression; seismic stress, accommodation; worldwide examples ... 1543
primary, petrology; Reykjanes Peninsula; Iceland; rift tholeiites ... 2143
primary, source; Hawaii; Mauna Loa; Kileaua; basalts, tholeiitic; volcanism ... 3111
sources; South Pacific; North Fiji Basin; spreading centers, petrology, geochemistry ... 3115
magma chambers
freezing, convecting; heat transfer, conductive; hydrothermal vents; implications for black smokers ... 306
magma melts
generation; Hawaii; mantle plumes; hotspot volcanism . 395
difference between; basalts, Hawaiian; rhyolites, Icelandic .. 3103
calculating compositions; mid-ocean ridges, beneath ... 3107
magma mixing
North Pacific, NE; Juan de Fuca Ridge, West Valley segment; mantle, heterogeneous, evidence for ... 1560
magmagenesis
potassic alkaline; Indonesia, Muriah, evidence from; volcanism; subduction zones; interplay of subduction zone and intraplate processes ... 380
North Fiji Basin; Pacific; tectonics ... 3108
magmatism
Tertiary, Mid-; North American Cordillera; plate tectonics; 29 papers ... 856
volcanism, and volcanology; U.S. report to IUGG ... 875
hydrothermalism; mid-ocean ridges; processes; U.S. report to IUGG ... 892
Aleutian Arc, geology, evolution; tectonics ... 1506
subalkaline andesite; Lau Basin, Valu Fa Ridge; spreading centers; chemistry, petrogenesis ... 1508
tholeiitic, Ar-dating and geochemistry; Atlantic, central, early opening; rifting ... 1550
Saudi Arabia; Red Sea, early rifting; rifting ... 1551
active eruption; East Pacific Rise, 9-10°N; mid-ocean ridges ... 2633
Miocene; Red Sea, opening; rifting ... 3098
trough; New Hebrides Arc, (Vanuatu); volcanic arcs; K-Ar geochronology and petrology ... 3106
magnetic<s> (See also geo- and paleomagnetics; remanent magnetism ...)
magnetic data
modelled; Japan Arc, NE; subduction zones ... 340
magnetic field
structure; Atlantic; Cape Verde Basin; Brazil Basin 333
reversals; Matuyama-Brunhes boundary; geomagnetic poles, virtual; non-zonal equatorial symmetry ... 334
anomalies; continent-ocean boundaries; satellites, from .. 336
mean contrasts; oceans; continents ... 337
Magsat studies; India, and surrounding regions; continent-ocean boundaries, definition ... 341

anomalies; oceans; continents; crust; meeting collection; 17 papers ... 343
data, anomalies; Indian Ocean, E; plate boundaries ... 372
reversals; South Africa; Agulhas Bank, SE of; crust, susceptibility, Koenigsberger ratio ... 403
Earth's; core, convection, dynamics; mantle convection; lecture ... 406
anomalies, contrast; Labrador Sea; passive margins ... 1456
anomalies, map; Japan, region; tectonics, implications ... 1458
data; Global Paleomagnetic Database; databases; design, installation, and use with ORACLE ... 1463
Bengal: Bay of; crust, magnetization ... 1465
anomalies; Guinea: Gulf of; Niger Delta; crust; fracture zones ... 1477
anomalies; Africa, West, off (20-38°N); Atlantic, E tropical ... 2118
Antarctica, West; Weddell Sea, opening; paleomagnetism, Thurston Island; tectonics ... 2134
data; Aqaba: Gulf of; seismicity ... 2635
magnetic surveys
Iceland ... 1461
Nigeria; Benue Trough, Abakaliki anticlinorium ... 1466
magnetism (More at GEOMAGNETICS ...)
magnetism: planetary
geomagnetic field, transient; the *K*-derived planetary indices ... 1464
magnetism: seamount
a theory of ideal bodies ... 1467
magnetization
implications for; Costa Rica Rift, DSDP Hole 504B; crust, alteration processes ... 413
stable remanent, origin; Pacific, central equatorial; siliceous sediments ... 2624
magnetization: remanent
thermo-; lithosphere; geomagnetic field, marine anomalies, source implications ... 332
magnetohydrodynamic dynamo
action; geophysical fluid dynamics; review ... 1758
magnetohydrodynamic thrusters
ships; submarines; propulsion, systems; theory, pros and cons ... 1079
magnetostratigraphy
Quaternary, Late; Arctic area; sediments; in German, English abstract ... 3075
magnetotaxis
evolution, behavior; biota; review ... 495
Maine
inner shelf; glaciomarine sediments; seismic stratigraphy ... 2049
Maine: Gulf of
Coccolithophoridae; plankton blooms; biological and optical properties of the bloom ... 1692
Quaternary; shelf sediments; stratigraphy ... 2016
tidewater glaciers; deposition, structural control of; sedimentation ... 2032
Fundy: Bay of; Appalachian Mountains, N, implications for; tectonics, deep seismic reflection data ... 2626
Majoidea
classification; Brachyura; Macrocheira, kaempferi, redescription ... 2804
Malacostraca
Belize; Caribbean Sea; Paranebalia, belizensis n.sp. ... 2287
malathion
assimilation; Florida; Indian River, Estuary; organophosphates ... 232
sorption; sediments, tropical estuarine ... 1355
mammals
marine; marginal ice zone; habitat selection ... 459
marine; Canada; fish; endangered species, and rare; status reports ... 1733
marine; Weddell Sea, winter aggregations in; seabirds; pack ice ... 2198
mammals: marine
California, central coast 1980-86; seabirds, dead; patterns of carcass deposition ... 1048
blood, hematological and rheological characteristics; diving, behavior, physiological implications for ... 2236
Greenland, N; Peary Land ... 2698
management: environmental
Arabian Gulf, past, present and future states; war, aftermath, impacts ... 593
needed; Mediterranean area; proposal for a multinational Mediterranean Authority ... 1102
U.S., S, Florida and Georgia; Trichechus, manatus; habitats, managing; geographic information systems, workshop; manatees ... 1630
and protection; scientifically-based strategies ... 2365
Jamaica; wetlands; development and degradation, redevelopment and preservation ... 3251
management: fisheries
population dynamics, commercial fisheries; reprinted classic of theoretical biology ... 600
World Ocean; fishery resources; ownership and productivity issues ... 1100
management: resource
Arctic area, environments; remote sensing; polar seas; environmental monitoring; symposium papers ... 3227
manatees
Florida, NW peninsula; Trichechus, manatus; distribution, movements ... 1629
U.S., S, Florida and Georgia; Trichechus, manatus; habitats, managing; environmental management; geographic information systems, workshop ... 1630
Florida; Trichechus, manatus; debris ingestion ... 2838
manganese
natural waters; trace analysis ... 179
paleochemistry; Galapagos Islands; corals ... 1377
dissolved; hydrothermal plumes; iron, dissolved; in-situ chemical mapping ... 1409
MnO_2/Mn^{2+} as potential governing system; sediments; redox chemistry ... 1572
species; seawater ... 1957
biosedimentation; hydrothermal vents, vicinity ... 2078
manganese crusts
Pacific, central; geochemical characteristics; in Chinese, English abstract ... 428
manganese nodule<s> (More at NODULES ...)
manganese nodule mining (More at MINING ...)
manganese nodules
Atlantic, Madeira Abyssal Plain; abyssal sediments; mechanism of surface retention of nodules during sedimentation changes ... 427
sediments; acoustics, sound scattering ... 1569
Indian Ocean, central basin; sediments ... 1570
Indian Ocean, central basin; internal constitution ... 2659
Pacific, NE equatorial; origin, distribution; in In Korean, English abstract ... 2660
North Pacific, W; bacteria, abundance ... 2662
South Pacific, SW equatorial; islands, EEZs ... 3139
Clarion Fracture Zone; Clipperton Fracture Zone; formation, growth ... 3143
mangrove ecosystems
from; organic matter, dissolved, export; evidence ... 1970
mangrove environments
bacteria, purple photosynthetic ... 1666
mangrove forests
dynamics; keystone species; productivity; nutrients, soil; crabs, burrowing, influence ... 2254
mangrove swamps
benthic metabolism; sulfates, reduction ... 493
bacteria, S-reducing; ecology, physiology ... 496
mangroves
Australia, NE, Endeavour River; species sequencing; zonation, analysis ... 481
Manihiki Plateau
Ontong Java Plateau; oceanic plateaus, oringin; mantle plumes ... 1538
South Pacific; volcanoes, mud or lava?; seamounts, surrounding ... 3099
Manningia
new; Persian Gulf; Stomatopoda ... 3190
mantle (See also hotspots; more at EARTH ...)
metasomatism; magma, depth of origin; basalts, fluid and silicate glass inclusions; xenoliths, mafic, ultramafic ... 382
heterogeneity; Philippines, Luzon; lavas, geochemistry; magma, multiple supply systems ... 387
elements, siderophile; early differentiation of the earth ... 414
seismic waves; predominance of long-wavelength anomaly ... 420
uppermost; Japan: Sea of; P-wave velocity ... 422
eastward flow; Mediterranean Sea, geodynamics; lithosphere, basal detachment; tectonics ... 882
upper, buried in; lithospheric plates, paleoplates; subduction, cyclic character; tectonics ... 888
upper, melting; magma, formation; new perspective ... 893
crust; chemical evolution, isotope geochemistry; U.S. report to IUGG ... 898
upper; crust; radiogenic heat, production model ... 1471

upper, seismic reflections; East Pacific Rise, beneath 1512
Scandinavia; Iceland; lithosphere, imaging and understanding; crust; symposium 1513
upper; Baikal Rift; crust, lower; seismicity, generation 1518
core-mantle interactions; symposium papers 1520
penetration into; subducting slabs, deep structure; lithosphere; earthquakes, S-wave analysis 1523
constituents, measurements and modelling; North Pacific, West Philippine Basin 1524
upper; Baltic Sea, S, beneath; lithosphere, lower, seismic models; crust 1525
upper; seismic waves, velocity gradients 1533
structure and dynamics; dipolarity 1544
structure, dynamics; tectonics; symposium 1545
sources, the Hf-isotope connection; mid-ocean ridges; islands; volcanic arcs 1548
upper, complex structures; Newfoundland; Bay of Islands, Lewis Hills; ophiolites 1556
heterogeneous, evidence for; North Pacific, NE; Juan de Fuca Ridge, West Valley segment; magma mixing 1560
Lau Basin, beneath; seismic waves; subduction zones; P-wave velocity anomalies 2149
interactions with; sediments, recycled, isotope evidence for involvement; diamonds, formation; crust 2155
upper; Europe, beneath; Mediterranean Sea, beneath; Asia Minor, beneath; seismic tomography, delay-time 2174
upper; Kurile Arc, islands, beneath; crust; structure and composition 2182
secrets of the; Kilauea; Hawaii; volcanic glasses; report .. 2381
evidence for coseismic slip?; South Pacific; Macquarie Ridge; earthquakes, 1989; seismic waves, long-period, radiation 2637
upper; Kenya; East African Rift, beneath; crust; seismic imaging 2643
upper; Nova Scotia; crust; margin, seismic profile across .. 2646
upper, global; seismic tomography; seismic velocities and anisotropies 2650
upper, temperature and composition; Mid-Atlantic Ridge; geoid, and depth anomalies; seismic waves; joint data inversion 2653
sources, changes in; Afar, depression; Djibuti Republic; volcanism; rifts, evolution 2656
shallow, enriched; Canary Islands; North Atlantic; volcanic rocks, compositions 3117
residual; basalts, MORB melts; mid-ocean ridges, beneath; in-situ densities, buoyancy forces 3124
melt extraction; spreading centers, beneath; mid-ocean ridges 3127

mantle convection (More at CONVECTION ...)
mechanisms 399
core, convection, dynamics; magnetic field, Earth's; lecture . 406
influence of phase transitions and chemical heterogeneity 1515
second-scale, influence; continental crust; lithosphere, continental, thickness 1549
petrology 1558
lithospheric dynamics; geodynamic heating system description 2185

mantle discontinuities
U.S. report to IUGG 879

mantle hotspots
Iceland; geoid, anomalies, interpretation 339

mantle melting
increased; Pleistocene, Late; Iceland, beneath Snaefellsjokull Volcano; deglaciation, during; volcanism 1498

mantle plumes
Hawaii; hotspot volcanism; magma melts, generation ... 395
mid-ocean ridges; interactions, fluxes and temperatures 415
symposium report 613
superplumes; volcanism; paleoclimate; relationship hypotheses; report 1115
superplumes; Cretaceous, Mid-; carbon dioxide; global warming 1421
starting; continents, breakup, role in; plate tectonics 1528
superplumes; geological consequences 1536
Ontong Java Plateau; Manihiki Plateau; oceanic plateaus, oringin 1538
flood basalts; volcanism, initiation of, model; oceanic plateaus 2146
Aptian; Ontong Java Plateau; Indian Ocean; volcanism, flood basalt 2148
heads; surface, Earth, interaction with; volcanism, flood basalt; onset of small-scale convection 2158
deep; Hawaii; Iceland; East African Rift, System, Nyiragongo/Nyamuragira; Antarctica, Mt. Erebus; hotspot volcanism; great circle distribution 2159
hotspots, and pre-existing thinspots; continental lithosphere 2655

mantle rheology
Pleistocene, Late; Holocene; Japan; sea level, changes; tectonics, implications for 864

mantle viscosity
plate motions, velocities, inferences from 2156

Manukau Harbor
New Zealand; water column; light, underwater 1215

mapping: seafloor
Mediterranean Sea; digital shaded relief map 585
satellite altimetry 2011

Mar Piccolo
Italy, S, Taranto; algae; reassessment 529

margin
generation over; topographic waves 64
dynamics, terranes; continents, growth; accretion tectonics; ACCRETE workshop steering committee reports 360
Labrador Sea; Greenland Sea; crust, structure; new seismic data 1514
Norway, off, 62-70 N; crust, structure 1547
seismic profile across; Nova Scotia; crust; mantle, upper .. 2646

margin sediments
recorded by; Quaternary; Africa, NW and E margins; continental environments 311
Messinian, event; Mediterranean Sea, off Nice, France ... 320
oil, and gas accumulation; tectonics, aspects 423
Australia, E; bacteria, growth rates, heterotrophic activity .. 499
Mediterranean Sea, Gulf of Lions; slumping, scars; erosion, of slopes, and correlated deposits; geotechnical characterization 822
contributions to; organic debris; particulates 1328
Caribbean Sea; Barbados, prism; clay diapirism 1392

margin tectonics
orogenesis, processes; review 362
India, northern; multicyclic history 861
forearc processes; U.S. report to IUGG 870
recent; Italy; Messina: Strait of 2125

marginal basins (More at BASINS ...)

marginal ice zone
Antarctica; sea level, height determination above; GPS applications 80
mammals, marine; habitat selection 459

marginal seas
Pacific, W; sediments, elements characterized; in Chinese, English abstract 3077
Mesozoic, -Cenozoic; China, SE, fault-sag zones; taphrogenesis, and dispersion 3091

margins: active
subduction; accretion tectonics 1494

margins: convergent
volcanic arcs, active; lithospheric stress, fields of the overriding plate 2131

margins: passive
Labrador Sea; magnetic field, anomalies, contrast 1456
detachment models for formation 2136

margins: transform
Australia, off; Exmouth Plateau; continent-ocean boundaries; tectonics, development 863

Mariana Arc
forearc; North Pacific, W; crustal accretion; tectonics .. 839

Mariana Islands
Holocene, emergent limestone; North Pacific, W; reef sediments; facies development model 820
North Pacific; Brachyura, majid; Bothromaia, griffini n.gen., n.sp.; Homoloidea, poupiniid; Poupinia, hirsuta, remarks on 2294

Mariana Trough
North Pacific, W; sedimentation; in Chinese, English abstract. 3052

mariculture (More at AQUACULTURE ...)
extensive; aquaculture; ecology and management aspects; 39 papers 1046

marigrams
the whirlwind effect 1910

marine agronomy (More at AGRONOMY ...)

marine boundary layer
clouds 150
Gulf Stream; atmospheric circulation, mesoscale; numerical simulation of cold air outbreak 763

dimethylsulfide, effects of; aerosols, marine, concentrations 770
evolution; U.S., SE, off; cold air outbreaks, during 1282
Baltic Sea, Swedish coast; atmospheric circulation; observations 2526
clouds, stratiform, formation 2534
marine envenomations
medicine, treatment of victims; toxicities; treatments for bites, stings, poisoning by consumption, electric shocking 1082
marine fauna
achieving an exhaustive inventory; cryptozoology, role 1641
marine mammals
California, central coast 1980-86; seabirds, dead; patterns of carcass deposition 1048
blood, hematological and rheological characteristics; diving, behavior, physiological implications for 2236
Greenland, N; Peary Land 2698
marine park<s> (More at PARKS ...)
marine parks
Philippines, Tubbataha Reef National Marine Park; status, management issues, plan 2877
marine plants
herbivores, marine; coevolution, myths; mutualism, precarious 1581
marine policy (More at POLICY ...)
marine research
Arctic area, Soviet 2880
marine resources (More at RESOURCES ...)
marine snow (More at PARTICULATE MATTER ...)
fecal pellets, zooplankton; metals, scavenging and retention; particulates, by 1978
particulates; fecal pellets; collection, analysis 2984
marine structures (More at STRUCTURES ...)
maritime industry (More at INDUSTRY ...)
Marmara: Sea of
NE, Golden Horn Estuary and Izmit Bay; Turkey; sediments; heavy metals 1352
Turkey; Istanbul; seismicity, long-term 2636
marsh creeks
Decapoda; Zostera, marina, eelgrass beds; Ulva, lactuca, sea lettuce beds; fish, epibenthic; habitats comparison 2252
marsh impoundments
restored; macroinvertebrates, reestablishment; populations comparison 2243
marsh sediments
salt; sulfur, reduced, variability; pore water, parameters 2594
marsh soils
carbon, organic; nitrogen, total; loss on ignition and Kjeldahl digestion, calibration 171
marshes (More at COASTS ...)
South Carolina, Bly Creek system; estuaries; detritus, and nutrients, annual material processing 482
marshes: salt
intertidal zone; Brachyura; Callinectes, sapidus, by 2806
Maryland
eastern shore; estuarine erosion; streams, inversion, piracy . 263
Patuxent River; Bivalvia, oysters; copper pollution; bioindicators 2337
Mascarene Ridge
central zone; Indian Ocean; crust, seismic sequence analysis 2167
mass extinction (More at EXTINCTION ...)
benthic; Paleocene, end; deep-sea warming, abrupt; paleocirculation, changes 1433
productivity, primary; selection, ecological selectivity 1453
mass flow deposits
Iceland, S shelf; basalts, hyaloclastite; volcanism, subglacial eruptions 2629
mass mortalities
North Atlantic, and elsewhere; Echinoidea; Diadema, antillarum; report 618
Cetacea, bottlenose dolphins; toxins, brevetoxin; 1987-88 Northwest Atlantic event investigated 960
Australia, NSW; Botany Bay; Centrostephanus, rodgersii; sea urchins; resultant changes in subtidal habitat 1632
mass spectrometry (More at SPECTROMETRY ...)
mass transport (More at TRANSPORT ...)
waves 2434
waves 2435
Massachusetts
Cape Cod; water resources; pollution; problems reaching crisis proportions 619
Buzzards Bay; coastal sediments; carbon cycling, estimating remineralization 1984
Boston Harbor; sedimentary environments, modern 2023
mathematical analysis
fluid dynamics; turbulence, modelling 604
mathematical geophysics
conference papers 2663
mathematical modelling
role; environmental science; an idiosyncratic assessment ... 2345
mats: bacterial
Mediterranean Sea, E; anoxic basins, from 2054
mats: cyanobacterial
North Sea, Wadden Sea; nitrogenase, diurnal activity 2775
biofilms; stromatolites; geophysiology 2833
mats: microbial
dimethylsulfoniopropionate, production, consumption 2262
hypersaline; bacteria, heterotrophic, contribution to $CaCO_3$ aggregates 2764
influence; North Sea; metals, heavy, gradients; interstitial water, intertidal 2766
bacteria, distribution; fluorescent sediment thin section technique 2777
Matuyama-Brunhes boundary
geomagnetic poles, virtual; magnetic field, reversals; non-zonal equatorial symmetry 334
Mauna Kea
Hawaii; basalts, tholeiitic and alkalic, petrogenesis; volcanoes, evolution 874
Mauna Loa
Hawaii; Kileaua; basalts, tholeiitic; volcanism; magma, primary, source 3111
Mauritania
Banc d'Arguin; algae; preliminary list 534
McMurdo Sound
Antarctica; basin sedimentation; interglacial climate, conditions; resultant facies distribution 2048
meanders (More at CURRENTS ...)
evolution; current jets; vorticity fronts, along 1156
measurement science
oceanography; meteorology; review of education in observational techniques; national facilities 610
measurements: global
oceans; toward a global ocean observing system 1050
mechanical energy (More at ENERGY ...)
medicine
treatment of victims; marine envenomations; toxicities; treatments for bites, stings, poisoning by consumption, electric shocking 1082
Mediterranean area
Tyrrhenian Sea, SE; crust; seismicity 418
Cadiz: Gulf of; Gibraltar: Strait of; water masses, exchange; mixing; volume transport 672
Aegean Sea; tectonics, active; subduction 865
environmental management, needed; proposal for a multinational Mediterranean Authority 1102
Neogene, to Quaternary; Corinth Basin, Greece; rifting; sedimentation; basins, uplift 2606
Hellenic Arc, WNW; earthquakes, estimating probability of recurrence times 3116
Mediterranean Sea (See also narrower geographic, physiographic and zonal designations ...)
as example; circulation, numerical models; climate, data assimilation 16
Egypt, coast, off; waves, characteristics 59
SE; nutrients, dissolved, and preformed; elements, ratios ... 209
Greece, Thermaikos Gulf; pesticides; runoff; pollution .. 226
seismic surveys; MedNet broad-band network 234
Gulf of Lion and Ebro continental margins; submarine valleys; depositional environments 242
Ebro Delta; littoral zone, morphological elements; in Spanish, English abstract 244
W; Neogene; tectonics; paleogeography; problems of palinspastic reconstruction; 12 papers 312
off Nice, France; Messinian, event; margin sediments 320
Hellenic Arc, and Cyprus Arc; arc tectonics 349
Mesozoic; basin sediments; petroleum, reservoirs, potential 425
Iroise Sea; nutrients; productivity; stratified ecosystems, shallow 436
seafloor mapping; digital shaded relief map 585
basin; eolian dust; atmospheric transport; dust intrusion events 769

W; Rhone Delta; pollution; hydrocarbons 804
Gulf of Lions; margin sediments; slumping, scars; erosion, of slopes, and correlated deposits; geotechnical characterization 822
climate; sapropels, formation; review 843
geodynamics; lithosphere, basal detachment; mantle, eastward flow; tectonics 882
E; productivity, primary, limitation; phosphorus 937
Gulf of Lions; particle transport, atmospheric, riverine; metals, Pb and Zn as indicators 1339
Pleistocene, Late; Israel, N; shelf sediments; origin of submerged marine terraces 1396
E of Crete; currents, near-bottom 1803
Pliocene, Late; Pleistocene, Early; sapropels; geomagnetic field, Gauss to Matuyama; astronomical calibration, implication for the polarity time scale 1429
Quaternary; Cyprus; crust, uplift; sea level, change 1438
E; pycnocline shoaling; sea level, lowering, due to 1439
NW; Halimeda, tuna, growing on; epiphytic hydrozoa, distributions 1642
Ebro Delta, Els Elfacs; benthic infauna, distribution 1643
NW; Caulerpa, taxifolia; algae, tropical, invasion by; in French, English abstract 1690
circulation 1790
Otranto Strait; strait flow; water masses 1805
NW; water masses, deep-water formation; 3-D numerical study 1816
deltaic and lagunal environments; seawater; sediments; phenols, phenolic compounds 1966
E; anoxic basins; sapropels, deposition; past and present deposition 2014
Messinian, refill channel; Valencia Trough, gorge; evaporite sediments, formation 2018
Bannock Basin; sediments, hardground formation 2043
E; bacterial mats; anoxic basins, from 2054
E; Hellenic Trench; sediments, structural features 2063
Pleistocene; Bannock Basin; sediments, facies analysis; tectonics, evolution, key to reconstruction 2064
E; sediments, geochemistry, composition, diagenesis 2067
E; sediment diagenesis; sapropels; barium, mobilization . 2074
E; Bannock Basin; tephra, layers; sediments 2075
E; Bannock Basin; paleoclimate, 26 to 5 kyBP; sediments, pollen and isotopic analysis 2081
central; Pliocene, Late; glaciation, glaciations; continental and marine responses 2083
Bannock Basin; Foraminifera, carbon and oxygen isotope composition; sediments 2108
Bannock Basin; sediments, evidence of relief inversion; crust 2153
beneath; Europe, beneath; Asia Minor, beneath; seismic tomography, delay-time; mantle, upper 2174
E; Bannock Basin; microbiota, vertical distribution 2260
Nematoda, diversity of assemblages along a deep-sea transect . 2268
E; chlorofluoromethane; oxygen; water masses, interactions 2406
Crete; Sea of; lithosphere, S-wave attenuation in; crust, OBS observations 2648
Red Sea; Suez Canal, as conduit; Lessepsian migration; biogeography, continuous process 2667
W; primary production; pigments, distribution 2686
Corsica, off, and adjacent canyon; meiobenthos 2713
medusae 2786
Sicily; Strait of; Tunisia, shelf; barotropic tides 2911
W; nitrogen, inorganic; atmospheric deposition 2957
Lion; Gulf of; sediments, mixing and accumulation rates .. 3056
Messinian; evaporite sediments, age, origin; Sr isotope studies 3074
E, margins; crust, structure variations; faulting, transcurrent . 3112
W; epibenthic communities; utilizing Spot satellite imagery; in French, English abstract 3169
E; Israel, coast; Scyphomedusae, including 2 Lessepsian migrants 3180
tin, organotins; pollution; continuing cause for concern 3239
W, vertical distribution in; Engraulis, encrasicolus, eggs and larvae 2700

medusae
Mediterranean Sea 2786
Atlantic, W; Hydrozoa; Scyphozoa 2787
distribution patterns; Anthomedusae; Leptomedusae; Limnomedusae; Narcomedusae; Trachymedusae . 2795

megafauna: benthic
Hawaii, Alenuihaha Channel; bathyal zone; fish, benthic .. 1633

meiobenthic communities
response; sewage pollution, gradient 2332
California, shelf; Santa Maria Basin 2711

meiobenthos (More at BENTHOS ...)
Mediterranean Sea; Corsica, off, and adjacent canyon 2713

meiofauna (More at FAUNA ...)
abundance, short-term changes; intertidal sediments 463
macroalgal decomposition; microbiota 535
soft-bottom, impacts on; Natantia; Crangon, crangon; experiment 2247

meiofauna: intertidal
Iceland; sand beaches 473

melanges
large-scale formation; Mesozoic, accretionary complex, example; Japan; seamounts; subduction 3090

Melita
2 n.spp.; Japan; Seto Inland Sea; Amphipoda 2295

meltwater: glacial
discharges; North Atlantic; deglaciation; deep circulation; climate change, abrupt, 15-10 kyBP 1432

meltwater runoff
retention by refreezing; sea level, projected changes, implications for 2932

mercury
concentrations, distributions; China; Jiaozhou Bay; seawater; phytoplankton; in Chinese, English abstract 231
Phaeodactylum, tricornutum, effects on growth; phytoplankton; in Chinese, English abstract 553
Phaeodactylum, tricornutum, Hg absorption; phytoplankton; interactions; in Chinese, English abstract 554
Phaeodactylum, tricornutum; toxicities; in Chinese, English abstract 555
effects on occurrence, transportation and speciation; China; Huanghai River, and Estuary; river runoff 1353
assessments; Tyrrhenian Sea, N; selenium, levels; biota, edible; Se/Hg relationships 1699
phases; soils; sediments; stepwise thermal analysis technique 1985
desorption; polluted sediments 1989
speciation; seawater, open ocean 1992
methylmercury formation; organic matter, DOC; sediment-water interface, partitioning at 1993
accumulation; Delphinidae 2313
contamination; North Sea; Kattegat; Cetacea, spp.; Phocoena, phocoena 2322
concentrations; Finland; aquatic ecosystems; pollution, 20 years after abatement of source 2326
environmental pollution; conference papers 2359

mercury flux
modelled; air-sea interface 1986

mercury pollution
Chaetoceros, sp, effects on; seawater; nutrients, phosphorus-limited conditions; in Chinese, English abstract 569

meroplankton (More at PLANKTON ...)

Mesodinium
rubrum; Dinoflagellata; Gonyaulax, catenata; plankton, vertical migration 1609

Mesozoic
Late; Cenozoic, Early; nutrients, oceanic distribution; oxygenation; water masses, limits on warm saline bottom water formation 313
Mediterranean Sea; basin sediments; petroleum, reservoirs, potential 425
Mid, the Gravina sequence; Alaska, SE; arc tectonics 900
accretionary complex, example; Japan; seamounts; subduction; melanges, large-scale formation 3090
-Cenozoic; China, SE, fault-sag zones; taphrogenesis, and dispersion; marginal seas 3091

Messina: Strait of
Italy; margin tectonics, recent 2125

Messinian
event; Mediterranean Sea, off Nice, France; margin sediments 320
refill channel; Mediterranean Sea; Valencia Trough, gorge; evaporite sediments, formation 2018
Mediterranean Sea; evaporite sediments, age, origin; Sr isotope studies 3074

metabolism
Georgia Bight, Gray's Reef; benthic communities; nutrients, cycling 975
California, Tomales Bay; land-sea interface; ecosystem heterotrophy; C-N-P stoichiometry 1333

Vietnam, off; productivity; coral reefs, ecosystems 1645
metabolism: algal
DMSP; Antarctica; salinity, tolerance; temperature, tolerance; ecophysiological investigations; in German, English abstract 532
metabolism: benthic
mangrove swamps; sulfates, reduction 493
metabolism: phosphorus
Copepoda, life cycle stages; zooplankton 2279
metabolites: bacterial
polysaccharides, exo-, production; hydrothermal vent microbiota 2776
metabolites: microbial
enzymes, extracellular; temperature, effects; polar seas, in . 2779
Metacyclops
cushae n.sp.; Louisiana; Cyclopoida 2819
metal<s> (More at ELEMENTS ...)
metal complexes: organic
copper, complexation behavior 2561
metal pollution
sediments; evaluation; in French, English abstract 230
metalliferous sediments
Juan de Fuca Ridge, near; hydrothermalism, manifestations 303
North Fiji Basin; accumulation rates, chemical partitioning, Q-mode factor analysis 3053
metallogenesis
processes; Hellenic Arc; Aegean Sea; hydrothermalism; volcanic arcs 1415
metals
Ag, Cd, Pb; Amazon River, and tributaries and estuary 185
Pb, Cu, Cd concentrations, spatial variations; Celtic Sea; in French, English abstract 228
coastal sediments 275
speciation; microbial growth; review 490
heavy; India, Thane creek; Polychaeta, Lycastis ouanaryensis 544
Portugal, N coast; Bivalvia; Mytilus, edulis 546
Cu, Zn, Pb, Cd; phytoplankton; toxicities; in Chinese, English abstract 560
Baltic Sea, S; Mollusca; sediments 568
Cd, Cu, Co, Ni, Pb, Zn; Weddell Sea; water column 776
Cu, Cd, Ni, Pb, Zn, Fe, Mn,; sediment slurries, in; mobility under anaerobic and 20% air saturation conditions 792
Hg, Cd, Pb; Posidonia, oceanica; Codium, tomentosum 1030
Ni, Sb, Se, Sn, U, V; U.K.; Tamar Estuary; electrochemical study 1313
Cu, Cd, Pb, Zn; geochemical behavior in solution and suspension; seawater 1315
Pb and Zn as indicators; Mediterranean Sea, Gulf of Lions; particle transport, atmospheric, riverine 1339
dissolved and particulate, distributions; Canada; Saint Lawrence Estuary 1343
enrichment factors; ocean dumping, of contaminated wastes . 1356
accumulation dynamics; bacterioplankton; seawater 1665
transition; Kamchatka, off; zoobenthos; gas hydrates, seeps 1703
scavenging and retention; marine snow; fecal pellets, zooplankton; particulates, by 1978
East Pacific Rise; suspended matter, in bottom waters; hydrothermal vents, high-temperature 2076
anomalous behavior; Okhotsk: Sea of; Paramushir Island, off; gas vents 2186
transition, and excess Th-230; Indian Ocean, central basin; ferromanganese crusts, mineralogy; implications for paleoceanographic influence on crust genesis 2658
heavy, gradients; North Sea; microbial mats, influence; interstitial water, intertidal 2766
transition, analysis; particulates; colloids 3013
associated; seawater; colloids; particulates; filtration, technique 3018
heavy; Arabian Sea; fish; cations, major; concentration correlations 3217
Baltic Sea; sediments, distribution; environmental implications 3244
metals: heavy
speciation; natural waters; in French, English abstract 189
Baltic Sea, S; sediments, enrichment factors in 806
influence; yellow substance, determination in estuarine areas; pH, influence 1212
Turkey; Marmara: Sea of, NE, Golden Horn Estuary and Izmit Bay; sediments 1352
transport; Japan; Seto Inland Sea 1354
Qatar, coast; algae 1702
accumulation; Bivalvia; Donacilla, cornea; calcium, content 1709
Pb, Zn, Cu, Cd; British Columbia; Georgia: Strait of; carbon; nitrogen; sediments, accumulation in 1991
Ireland, Cork Harbour; sediments; shellfish; baseline 2314
Cuba, Cienfuegos Bay; fish, *Micropogonias furnieri*; baseline .. 2320
antibiotics; bacteria, vent, 8 taxa, susceptibility 2738
distribution; India; Bombay; pollution; seawater; particulates 3037
Aegean Sea; benthos, flora and fauna; baseline 3204
metals: trace
seawater; electrothermal AAS determinations 180
sediments; Cu, Zn, Cd, Pb determinations 182
seawater, deep-ocean, abundances in; effect of surface reactions 187
dissolved and particulate; North Sea, Dogger Bank area; surface, waters 229
Adriatic Sea, N; seaweeds 559
enrichments; Spain; Cadiz: Gulf of, waters 797
speciation; Trinidad, Gulf of Paria; sediments 802
Italy, Olbia Bay; sediments 808
persistence; Arctic area; sediments; drilling effluents, contamination by 1092
Bengal: Bay of, W, distribution in; particulates 1341
accumulation; California, Borderland; Santa Barbara Basin; sediments 2068
scavenging, effects on; bacterial communities, changing; particulates, deep-sea plume 2256
waste disposal, dumping ground; sediments 2361
particulate; Indian Ocean, distributions over; atmospheric aerosols 2551
Mississippi River, Delta outflow region; river discharges .. 2583
metamorphism
greenschist; Bengal: Bay of; sediments 2154
meteorological data
satellites, polar orbiting; NESDIS operational sounding products 2865
meteorological satellites
Europe, systems 2493
China, program 2495
meteorology
measurement science; oceanography; review of education in observational techniques; national facilities 610
attack on a paradigm; weather fronts; report 3260
meters (More at OCEANOGRAPHIC APPARATUS ...)
meters: current
ADCP; performance in near surface and bottom boundaries ... 1140
acoustic Doppler; instrumentation, comparison 1142
acoustic correlation 1143
ACDP; broad-band, performance 1144
acoustic Doppler 1145
ACDP; design and tests of trawl-resistant package 1146
acoustic Doppler; hydrographic surveys; use in mesoscale surveys 1149
with intelligent data system, environmental sensors, and data telemetry 1150
mechanical; measurement degradation by mooring or wave motion 1155
vector-measuring; high-speed real time data acquisition 1157
acoustic; error analysis 1162
ACDP; single ping data 1163
acoustic Doppler; gravity waves, surface; field verification of measurements 1177
methane
Sargasso Sea; carbon monoxide; seawater, distributions and consumption in 200
greenhouse gases; atmosphere; carbon monoxide 2549
Mid-Atlantic Ridge, Snake Pit site; hydrothermal fluids; helium 3063
methane: biogenic
Mexico: Gulf of; Florida Escarpment, base of; brine seeps, abyssal 826
methane flux
Arabian Sea, from; air-sea interactions; atmosphere, to . 2514
methane: microbial
enhanced oxidation; vent fluids 990
Metridia
pacifica; California Current; Copepoda; population dynamics, genetic response; eddies, coastal, response to . 1003

Mexico
Cozumel; Porifera; coral reefs; fish; hurricanes, Gilbert, effects ... 971
Navachiste Lagoon; Bivalvia; trace elements, distribution; baseline ... 1043
Tabasco shelf; sediments; petroleum pollution ... 1351
Cretaceous-Tertiary boundary; Yucatan Peninsula; Chicxulub Crater; impact craters ... 1428
off Manzanillo; North American Plate, active fragmentation; plate tectonics; triple junctions ... 1478
Yucatan Peninsula, from firepit on; sea level, curve ... 1746
subduction zones; earthquakes; plate motions; tectonics, implications ... 3126
off Acapulco; submarine volcanism; mid-ocean ridges; benthic fauna seared by eruptions; report ... 3261
Mexico: Gulf of (See also narrower geographic, physiographic and zonal designations ...)
W slope; rings, warm-core; eddies; interactions ... 22
N; sea level, rise; tides, gauge records 1909-1988; subsidence 261
NW; Foraminifera; water masses, association with ... 524
over; air-sea interactions; air masses, modification, modelling, forecasting, measurements ... 617
Florida Escarpment, base of; biogenic methane; brine seeps, abyssal ... 826
N; beaches, barrier-island; macroinvertebrates, associations; important environmental relationships ... 982
Florida Escarpment base; seafloor; crust, porous, deep in; bacteria, as producers of methane; seep communities; report ... 1119
Florida Escarpment; erosion terraces ... 1406
NW; Paleogene, stratigraphy; sedimentation, rates ... 1426
Campeche Bank; bacteria; oil fields ... 1659
U.S. coast; Amphipoda, new sandhoppers ... 1672
N; Florida, Panama City beach; Amphipoda; Haustorius, jayneae n.sp. ... 1676
surface temperature; phytoplankton, concentration; seasonal variations, satellite observations ... 2885
Caribbean Sea; lithospheric heat flow; comments ... 3084
N, field experiments; seagrass beds, influence on; sea urchins, grazing, role; herbivory ... 3173
tin, butyltins; biomonitoring, using oysters ... 3221
micrite crusts: laminar
Red Sea; reefs, foreslope processes ... 1374
microalgae (More at ALGAE ...)
Selenastrum, capricornutum; aromatic hydrocarbons, volatile; toxicities, and bioconcentration, relationship ... 552
response; primary production; light, changing ... 929
Phaeocystis, sp., ability to grow; phosphates, organic ... 1617
importance; zooplankton, crustacean, food sources; bacteria, importance ... 1621
sea ice, melting; phytoplankton, released, aggregations of .. 2224
development as tracer particles; zooplankton herbivory 2691
microalgae: benthic
Antarctica, Signy Island; primary production ... 2309
intertidal; tides, stage, effects; light, sun angle effects; productivity ... 2310
microalgae: ice
Barents Sea; photosynthesis, photoadaptation ... 1023
microalgal communities
benthic; nutrients, effects of enrichment; community composition in shallow water ... 1026
microalgal growth
microphytobenthos; nutrients, uptake ... 3200
microbes (More at MICROBIOTA ...)
microbial biomass
Antarctic Peninsula; Bransfield Strait, region; productivity ... 1655
microbial communities
limited vs unlimited membership; paradigm testing ... 1660
deep-sea; nutrients, availability ... 2746
Baltic Sea; distribution, activity ... 2763
organic chemicals; mineralization, in seawater ... 2778
microbial degradation
crude oil, evaporitic ... 550
oil slicks; enhancement using slow-release fertilizer; in Chinese, English abstract ... 591
microbial ecology
mathematical aspects, conference papers ... 2737
microbial food webs
estuaries; synergism between research and models ... 2723
Baltic Sea; eutrophic estuaries, tideless ... 2767
Baltic Sea; eutrophic estuaries ... 3178
sensitivity; eutrophication; pollutants, enrichment ... 3222
microbial growth
metals, speciation; review ... 490
microbial mats
dimethylsulfoniopropionate, production, consumption 2262
hypersaline; bacteria, heterotrophic, contribution to $CaCO_3$ aggregates ... 2764
influence; North Sea; metals, heavy, gradients; interstitial water, intertidal ... 2766
bacteria, distribution; fluorescent sediment thin section technique ... 2777
microbial metabolites
enzymes, extracellular; temperature, effects; polar seas, in . 2779
microbial methane
enhanced oxidation; vent fluids ... 990
microbial populations
Prince William Sound; hydrocarbon biodegradation, potentials; sediments, shoreline, fertilized; Exxon Valdez, spill ... 1705
microbiota (See also BACTERIA, microbes, microorganisms, viruses; more at BIOTA ...)
processes affecting alanine and glutamic acid; anoxic sediments ... 488
bacteria; biodegradation, of GABA (gamma-aminobutyric acid) ... 491
macroalgal decomposition; meiofauna ... 535
DNA, and RNA, measurements; fluorescence, techniques, evaluation ... 917
aquatic communities; amplification, cloning and sequencing of a nifH segment ... 1656
heterotrophic, by; Cuba, Batabano Bay; organic matter decomposition ... 1661
vertical distribution; Mediterranean Sea, E; Bannock Basin ... 2260
associated; North Pacific, E; biogenic particulates; biogeochemical cycling, productivity implications ... 2578
Echinodermata, deposit feeders; Holothuria, tubulosa; sediment communities; relationship ... 2702
limitations of nalidixic acid dependent viable direct counts; sediments ... 2732
thymidine and leucine incorporation; sediments; bacteria .. 2753
from; biogenic surfactants; petroleum biodegradation, bacteria ... 2769
surfactants, synthetic, and biosurfactants; toxicity testing .. 2845
Microcoleus
chthonoplastes; Oscillatoria, limosa; cyanobacteria, mat-forming; interactions; bundle formation and de novo mat genesis ... 2748
microcosms: sediment
organic matter mineralization, aerobic and anaerobic 2257
microecosystems (More at ECOSYSTEMS ...)
microfauna (More at FAUNA ...)
microfossils (More at FOSSILS ...)
assemblages; France, SW, Quercy; shelf sediments, carbonate ... 326
sample preparation, damage report ... 1449
micronekton
Antarctica, waters around; macrozooplankton; community structure; sea ice, beneath ... 961
Hawaii, waters around; neritic-oceanic interface, communities at ... 963
micronodules (More at NODULES ...)
microorganism<s> (More at MICROBIOTA ...)
microphytobenthos
seasonality; Antarctica; South Orkney Islands, Signy Island; sediments ... 539
influence on; Bivalvia; Cerastoderma, edule ... 1646
influence; sediment-water interface; nutrient flux ... 1698
microalgal growth; nutrients, uptake ... 3200
microphytoplankton (More at PLANKTON ...)
microplankton (More at PLANKTON ...)
Caribbean Sea, during spring bloom; saline fronts; trophic dynamics, structure ... 2211
autumnal distributions; Antarctic Peninsula, N and W of; in German, English abstract ... 3156
microplankton communities
British Columbia; Georgia: Strait of; patchiness; mosaicism ... 1592
microplate readers
seawater; nitrogen, colorimetric assays ... 1950

microscope mounts
and specimen location technique; pollen, palynological strew mounts ... 3082
microscopy (See also photomicrography, SEM, TEM ...)
STM; hydrothermal sediments ... 2604
epifluorescence; picoplankton, estimation ... 2684
preparation for using hydrofluoric acid; calcareous shells, and tests ... 3081
microseisms
storm-; seismic noise, spectra ... 404
microseisms: storm
and infrasonic; typhoons, movement, occurring with ... 1934
heat budget, role in ... 1935
microtektites (More at tektites ...)
microvibrions (More at BACTERIA ...)
microwave backscatter
breaking waves; detection and verification ... 2437
breaking waves; dependence on wind and wave conditions .. 2438
microwave instrumentation
satellites, ERS-1 ... 1049
microwave remote sensing
and telemetry; spaceborne radar; planetary research; Magellan (Venus) and various earth observing systems; 8 papers ... 1057
microwave spectrometers (More at SPECTROMETERS ...)
microzooplankton (More at PLANKTON ...)
standing stock; coral reefs ... 435
Mid-Atlantic Bight
106-mile site; seafloor, area impacted; sewage sludge, dumped ... 801
Mid-Atlantic Ridge (See also AMAR area, FAMOUS area)
tectonics, features; isostasy, compensation ... 351
eastward flow through, at 11N; abyssal circulation ... 1131
along, adjacent to; sulfide deposits, pelagic; patterns of distribution, mantle spicule theory ... 1391
radionuclides; hydrothermal scavenging ... 2565
hydrothermal plumes, signatures ... 2601
N; Jan Mayen, island; seismicity; volcanism ... 2632
mantle, upper, temperature and composition; geoid, and depth anomalies; seismic waves; joint data inversion ... 2653
hydrothermal scavenging; trace elements, flux modification ... 3061
Snake Pit site; hydrothermal fluids; helium; methane ... 3063
26°N; hydrothermal plumes; structure, mass, interactions .. 3064
basalts, MORB; Sr-Nd-Pb isotope signature ... 3100
Middle America Trench
seismicity, synthetic model; faults, interactions with; tectonics ... 3130
vicinity; lithospheric heat flow; new data ... 345
mid-ocean ridges (More at RIDGES ...)
flank roughness; seafloor spreading, rate; inverse square-root dependence ... 364
mantle plumes; interactions, fluxes and temperatures ... 415
dynamics; U.S. report to IUGG ... 871
hydrothermalism; magmatism; processes; U.S. report to IUGG ... 892
crust, discontinuities, segments and giant cracks ... 895
influences of; chlorophyll; productivity; effects on large-scale patterns ... 954
East Pacific Rise; hydrothermal vents, distribution; tectonics, and magmatism, relation to ... 1410
hydrothermal circulation; 3-D simulation ... 1414
hydrothermal circulation; silica, behavior; coupled fluid flow and reaction ... 1416
mantle, sources, the Hf-isotope connection; islands; volcanic arcs ... 1548
East Pacific Rise, 9-10°N; magmatism, active eruption ... 2633
rocks, 'popping'; vesicles, contents; implications for degassing, discussion ... 3101
beneath; magma melts, calculating compositions ... 3107
beneath; basalts, MORB melts; mantle, residual; in-situ densities, buoyancy forces ... 3124
spreading centers, beneath; mantle, melt extraction ... 3127
Mexico, off Acapulco; submarine volcanism; benthic fauna seared by eruptions; report ... 3261
midwater trawls (More at TRAWLS ...)
migration
vertical; Dinoflagellata; Prorocentrum, micans; phototaxis, and gravitaxis ... 538
vertical; tidal currents; biota ... 1593
diel vertical; zooplankton; predators, rapid response to 2209
long, oceanic; sea turtles; navigation, mechanisms ... 3164
migration: Lessepsian
Red Sea; Mediterranean Sea; Suez Canal, as conduit; biogeography, continuous process ... 2667
migration: salmon
North Pacific; Oncorhynchus, spp.; models of orientation and navigation at sea ... 458
Millepora
spp., elimination of; El Niño, 1982-83; corals, reef-building .. 432
Milleporina
Bahamas, central; Scleractinia; coral reefs; community similarity and area coverage ... 2710
mineral resources (See also metallogenesis, ores; more at MINING, RESOURCES ...)
South Pacific; hydrothermalism; sedimentary basins; geology, geophysics ... 3144
mineralization
in seawater; organic chemicals; microbial communities . 2778
mineralization: chitin
estuarine sediments; chitosan, pathway, importance of 1667
mineralization: organic matter
aerobic and anaerobic; sediment microcosms ... 2257
mineralogy
and medium viscosity; carbonate precipitates, $CaCO_3$; bacteria, as inducers; relationships ... 268
and surface properties; particulates; workshop report ... 2988
minerals: carbonate
Caribbean area, Nicaragua Rise vs the Bahamas; sediments; water column; mineralogy and chemistry ... 2052
minerals: clay
Pacific, S central; sediments ... 278
Pacific, central; sediments; in Chinese, English abstract 301
North Sea; particles, ultrafine; STM and AFM investigations 825
Bengal Fan; sediments, history, chemical characteristics ... 1384
Bannock Basin; sediments, pelagic; sapropels; clay origin and differentiation ... 2072
India, W, off Saurashtra; sediments, shelf and slope ... 2596
India, E, Krishna to Ganges River mouth; shelf sediments .. 2597
Neogene, -Quaternary; Egypt; Nile Delta, Ras El-Barr well; shales, thermal maturity ... 3050
minerals: seabed
potential, effects on; Solomon Islands; Pacific; fault zones, strike-slip ... 3131
mining (See also dredging, minerals; more at INDUSTRY ...)
minorities
science, recruiting nontraditional players; women; handicapped, physically disabled ... 3254
Miocene
lower; Atlantic, E equatorial; Niger Delta, Afam clay member; delta sediments ... 1395
Early; Japan: Sea of, opening, implications for; paleomagnetism, in the Kani group in SW Japan; tectonics .. 1457
Late, since; insolation, values; climate, past 10 myr; radiation, solar ... 1903
Red Sea, opening; magmatism; rifting ... 3098
-Pliocene; Pacific; Solomon Islands, Iron Bottom Basin; sediments; hydrocarbons, potential reef traps ... 3135
Mission to Planet Earth
program description; U.S., NASA; global change; climate . 2863
Mississippi
Old Fort Bayou; littoral zone; nekton communities, dynamics; river-estuarine gradient, along ... 2238
Mississippi Delta
and fan; fan sediments; sequence stratigraphy; discussion ... 845
lower; Foraminifera; Arcellacea; controls on spatial distributions ... 3197
Mississippi River
Delta outflow region; river discharges; trace metals ... 2583
Copepoda, nauplii, associated; river plumes, nutrient-rich .. 2675
Mithraculus
Atlantic, W; Brachyura, majid; Mithrax ... 3194
Mithrax
Atlantic, W; Brachyura, majid; Mithraculus ... 3194
mitigation
options; atmospheric carbon dioxide, global emissions; preliminary assessment ... 2370
mixed layer (More at LAYERS ...)
role of finite thickness; ventilated thermocline ... 111
modelling; Indian Ocean, E; ocean-atmosphere interactions ... 745

dynamics; buoyancy transport 1229
depth; Indian Ocean, N; Ekman pumping, velocity; monsoons, SW, during 1280
upper, in; phytoplankton; photosynthesis, response; Eulerian model 1597
depth; Sargasso Sea; satellite imagery; construction and accuracy analysis of images 2417
dynamics; North Atlantic; phytoplankton, abundance; nutrients, cycle; meridional variability of the seasonal cycle; in German, English abstract 3163
mixed layer: turbulent
generation and growth; in rotating stratified fluid 2487
mixing (More at FLUID DYNAMICS ...)
studies, history; fluid dynamics, ocean 107
shear layers, viscously decaying; particles, dynamics 110
Cadiz: Gulf of; Gibraltar: Strait of; Mediterranean area; water masses, exchange; volume transport 672
fluid dynamics; turbulence; Kolmogorov similarity hypotheses for scalar fields 725
chaotic; Rossby waves; vorticity; fluid dynamics 1248
depth, relationship to; Antarctic Peninsula; Bransfield Strait; phytoplankton, observations, modelling 1603
Canada, W coast; shelf currents; physical oceanography ... 1763
turbulence; heat flux; thermocline, main, in 2476
3-D compressible layer; fluid dynamics; inviscid spatial stability 2477
vertical; Southern California Bight; cosmogenic tracers; radionuclides, P-32, Be-7 2480
turbulence; shear flow, stratified 2944
mixing: boundary
model 1885
gravity currents; propagation along an incline 2413
mixing: convective
atmospheric; monsoon boundary layer 750
mixing: sediment
California, borderland; Santa Catalina Basin; conservative tracer study 2041
Miyake: Yasuo
professor of marine chemistry; obituary 608
modelling: centrifuge
ocean research, potential for use in 576
modelling: circulation
global climate, system sensitivity; impact of initial conditions . 136
advection, numerical schemes; influence on GCM results 637
satellite altimetry, Seasat; recent studies reviewed 642
snow; climate, feedback; feedback interpretations in 17 GCMs 737
GCM, atmospheric; climate change, regional, review of approaches to simulation; review 739
atmosphere; oceans; computational dispersion properties of horizontal staggered grids 1053
atmospheric water vapor; climate; better understanding of water vapor role needed 1749
stratification, deep-water representations 1771
free surface Bryan-Cox-Semtner model 1777
Southern Ocean; open boundary condition in the U.K. FRAM model 1787
contributions; Cox: Michael; tribute 2375
and organism transfer, results 2378
Southern Ocean; FRAM model 2379
wind, satellite scatterometer, to force GCMs 2897
modelling: climate
energy balance model with hydrological cycle; sensitivity to internal parameters 1264
stability and sensitivity to external forcing 1265
climate change, long-term 1266
sea ice; albedo, parameterization 1267
thermohaline circulation, catastrophic transitions 2400
parameterizing subgrid-scale open water 2503
modelling: ecological
ecohydrodynamic; hierarchy, and scases 2666
using an object-oriented programming language 2876
modelling: geothermal
forward and inverse techniques, symposium papers 1470
modelling: hydrographic
estuaries; oceans; an equation of state for numerical models . 621
modelling: mathematical
role; environmental science; an idiosyncratic assessment ... 2345
modelling: risk
oil spills 592
moisture
distribution above; air-water interface; surfactants, as coating 1283
moisture: atmospheric
deficit; Northern Hemisphere, 140 kya; deglaciation, major 316
moisture: surface
North Sea, Jade region; sand flats; pore water; salinity; in German, English abstract 192
moisture transport
formulation; circulation, GCM simulations, sensitivity; climate 135
molecular paleontology
fossil record, biomolecules; biochemical systematics 2386
Mollusca
5 spp.; Pecten, maximus, and others; growth, postlarval; reproduction, patterns 477
North Atlantic, W coast; Cyclope, neritea, spread; relation to oyster culture and climatic fluctuations 505
Baltic Sea, S; metals; sediments 568
new and little known; Iceland; Scandinavia 998
Foraminifera; , benthic fauna; fauna: benthic; rates of movement and sedimentary traces (laboratory studies) 1018
faunas, paleobathymetry; Holocene; Nile Delta; Egypt; delta sediments 1443
fossil record; shells, fossil and modern; amino acid racemization, /epimerization, kinetics of 2615
molybdenum
dissolved, distribution; Seto Inland Sea; Japan: Sea of; Bering Sea; North Pacific, W 1314
concentration; seawater; anoxic basins, and sediments; vanadium, concentration 2579
momentum
linear systems analysis; Great Barrier Reef; shelf currents, and slope; flow 2901
momentum transport (More at TRANSPORT ...)
and generation; precipitation, and kinematic structure; atmospheric convection 2524
monitoring: atmospheric
air temperature; remote sensing; microwave temperature sounders compared 2492
tropospheric temperature; remote sensing; precision monitoring 1979-90 2497
monitoring: climate
surface temperature, multichannel, product quality 2491
monitoring: environmental
analytical chemistry; review 170
Hong Kong; coal ash lagoons; an 'oyster watch' monitor .. 1028
North Sea Task Force; the first two years 1074
Australia, NW, off; oil fields, offshore 1734
bacteria, identification; reverse sample genome probing 2263
Arctic area, environments; remote sensing; polar seas; resource management; symposium papers 3227
monitoring: global
sea level, observing system 47
monitoring: pollutant
fish; EROD methodology, measurements 2841
U.K., monitoring programs, impact assessment, disposal licensing, etc.; contaminants, non-radioactive; ocean waste disposal; MAFF report 1988-89 1088
Antarctica, environment; hydrocarbons, baseline; review .. 1988
Europe; biomonitoring; water quality, issues; report of the ICES Advisory Committee 2868
Chesapeake Bay; tin; tributyltin; statistical modelling of data 3039
biomonitoring, long-term; contaminants; Southern and Northern Hemisphere perspectives 3247
tin, organotin; tributyltin; symposium 3248
monitoring: thermohydrodynamic
use of quasi-Lagrangian information 1894
Monoporeia
affinis, as bioturbator; Amphipoda; community structure, meiobenthic, effects on; bioturbation, biological disturbance 980
monsoon<s> (More at WIND(S) ...)
monsoon
SW, during; Bengal: Bay of, western boundary; wind-driven upwelling, coastal 2424
SW, 1979; Arabian Sea, NW; phytoplankton blooms 2671
monsoon boundary layer
convective mixing, atmospheric 750
monsoon circulation
Indian Ocean, W equatorial, above; pre-onset transformations 1285
understanding and prediction 1302

Australia, N of; atmospheric convection; the Equatorial Mesoscale Experiment, overview ... 1897
Pacific, W tropical; ocean-atmosphere interactions; generation of the Mindanao Dome ... 1914
onset; India; model description and validation ... 1919
onset; Arabian Sea; air-sea interactions; budget and sensitivity studies ... 1920
boundary-layer heights over the trough region during active and break phases ... 1921
India; monsoon rainfall; secular variations in relationships ... 1932
Indian Ocean; forcing mechanisms ... 2082
climate; long-term regulators ... 2382
Indian summer; modelling ... 2520
monsoon currents
Indian Ocean, tropical; wind-driven flow, and geostrophic 2411
monsoon depressions
wind field; clouds, structure ... 2530
Monsoon Experiment (Use MONEX)
monsoon rainfall
summer; India; water masses, Pacific Ocean Warm Pool, position; relationship ... 1274
Indian; surface temperature; Southern Oscillation, and 500 mb ridge position in April; relationships ... 1281
India; monsoon circulation; secular variations in relationships ... 1932
monsoon year
proposed as concept; tropics; climate, unit year of climate anomalies; ocean-atmosphere interactions ... 1270
MONSOONEX (Use MONEX)
monsoons
SW, during; Arabian Sea, over; insolation; irradiance ... 736
SW, during; Indian Ocean, N; mixed layer, depth; Ekman pumping, velocity ... 1280
NE, during; India, W, off; coastal currents ... 2414
response to forcing by; Arabian Sea, variability in thermal response; circulation; heat flux; air-sea interactions . 2515
summer; Bengal: Bay of, N; currents, variability; air-sea interactions ... 2516
SW, during the course of; India, over; surface temperature . 2517
SW, during; Bengal: Bay of, N; flow, stability and mixing .. 2518
onset; India, over; rainfall, subsequent; relationship ... 2539
Montastrea
annularis; effects on banding, isotopic composition; Scleractinia; coral bleaching ... 995
annularis; Caribbean Sea; Scleractinia; corals; carbon, and oxygen isotope time series ... 1379
Monterey Bay
California; waves, nearshore field; energy density directional spectra ... 2916
Morocco
coast, distribution along; North Atlantic, SE; Bivalvia; Donax, truncules, venustus; in French, English abstract .. 3181
mortalities
incidental to fishing; International Whaling Commission, workshop results; Cetacea; fishing nets, and traps; report ... 1099
mortalities: mass
North Atlantic, and elsewhere; Echinoidea; Diadema, antillarum; report ... 618
Cetacea, bottlenose dolphins; toxins, brevetoxin; 1987-88 Northwest Atlantic event investigated ... 960
Australia, NSW; Botany Bay; Centrostephanus, rodgersii; sea urchins; resultant changes in subtidal habitat ... 1632
mosaicism
British Columbia; Georgia: Strait of; microplankton communities; patchiness ... 1592
Moss Landing
Harbor; California, Loma Prieta 1989; waves, short-period, generation; landslides, as caused; earthquakes, as ultimate cause ... 687
onshore and offshore sediments; California; sediment liquefaction; earthquakes, during the 1989 Loma Prieta quake ... 1526
Mount Fuji
Japan; Hakone Volcano; volcanoes ... 1495
Mozambique
N, off; earthquakes, normal fault; a possible isotropic source . 1529
Inhaca Island; Asteroidea, 17 spp.; Echinodermata; systematics, zoogeography ... 3182
mud (More at SEDIMENTS...)
mud flats
macrotidal; Korea, SW coast; intertidal sediments ... 2044
mudbanks (More at BANKS ...)
mudbanks: intertidal
role; Papua New Guinea, Fly Delta; nutrients, particulate and dissolved, diagenesis and export ... 208
muds: drilling
cuttings; Bivalvia, adult sea scallops, chronic sublethal impact on ... 1031
Muggiaea
kochi; Siphonophora; laboratory life cycle ... 2781
multichannel assembly for radio-plankton sinking (Use MARS)
multivariate analysis
permutation methods; earth science; application based on distance functions ... 237
mushroom structures
water column, upper; Fedorov structures, coherent ... 1876
mussel beds
intertidal fauna; amensalism or amelioration? ... 464
as stimulus; phytoplankton ... 478
mussel beds: intertidal
Wadden Sea, and Scheldt Estuary; Netherlands; estuarine nutrients, influence on ... 483
mussel growth
rates; tin; tributyltin, site-specific effects; biomonitoring, and assessment ... 3214
Mussel Watch
sampling, improved protocols; biomonitoring ... 1706
mussels (More at SHELLFISH ...)
radionuclides, fluctuating concentrations in seawater; ruthenium, -106 concentration dynamics ... 1704
tissue levels; tin, alkyltins; toxicities ... 3212
mutagenicity
on; Alaska; Prince William Sound; bioremediation, effects; oil spills; Exxon Valdez ... 2356
mutation
evolution; organisms, can they direct their evolution ... 573
mutualism
precarious; marine plants; herbivores, marine; coevolution, myths ... 1581
Mysidacea
Leptomysis, lingvura; cadmium, sublethal effects; toxicities, to respiratory metabolism, nutrition, excretion, hydrolase activity ... 1034
leptomysinid; Tasmania, S; Antichthomysis, notidana n.gen., n.sp. ... 3186
Mytilus
edulis, effects on growth; Bivalvia; particulates, resuspension 502
edulis; Portugal, N coast; Bivalvia; metals ... 546
edulis, variations in age-class densities; Bivalvia; population dynamics; estuarine communities ... 978
edulis; Bothnian Sea; Baltic Sea, N; cadmium; zinc 2315
edulis; Bivalvia; biomonitoring; stress, indices ... 2336
Fucus, canopy; community succession; ice scours, massive, following ... 3168

Namibia (See also South-West Africa)
off; South Atlantic, E; Decapoda; biogeography, community structure ... 1008
coast; South Atlantic, SE; seston biomass; upwelling zones ... 1616
Namibian Upwelling
variability in; particulates; organic matter, POC; nitrogen, PON ... 1334
nannoflagellates
growth rate; chlorophyll pigments; carbon, cell; nitrogen, cell ... 2676
nannofossils (More at FOSSILS ...)
nannofossils: calcareous
Pacific, W; Eniwetok Atoll; Foraminifera, planktic ... 2591
Eocene, Mid-, to Lower Miocene; South Atlantic, subantarctic; magnetobiochronology ... 2620
adaptation of the random settling method for quantitative studies 3078
nannoplankton (More at PLANKTON ...)
California, central coast waters; flagellates, choanoflagellates 953
North Sea; flagellates, nanno-, benthic heterotrophic; algal sedimentation, response to ... 967
plastidic vs aplastidic; Ciliata, measurement and simulation of prey uptake ... 1618

communities, dynamics and productivity; Korea, Chonsu Bay; in In Korean, English abstract 2695
Narcomedusae
Anthomedusae; Leptomedusae; Limnomedusae; Trachymedusae; medusae, distribution patterns 2795
Narrow River
post-glacial history, plankton, pollution, flows, restoration; Rhode Island, Narragansett Beach; coastal zone, river inlet as natural laboratory for science and management; 7 papers 1113
natality
survival, rate; growth, rate; recruitment; relationships 2205
Natantia
Upogebia, pugettensis, effects; benthic macrofauna, infaunal abundance 474
shrimp occurrence and distribution; Weddell Sea, E 999
Crangon, crangon; meiofauna, soft-bottom, impacts on; experiment 2247
Australia; Carpentaria: Gulf of, NW; Penaeus, semisulcatus, growth, movement, age structure and parasite infestation (*Epipenaeon ingens*) 2291
National Center for Atmospheric Research (Use NCAR)
National Geophysical and Solar-Terrestrial Data Center of NOAA (Use NGSDC)
nations: developing
environmental protection, marine; what cost? 2879
natural gas (More at GAS, HYDROCARBONS, PETROLEUM ...)
natural selection (More at SELECTION ...)
natural waters (More at WATER ...)
marine; interstitial water; carbon, DOC stable isotope ratios 167
chlorophyll, -*a* determinations; methods comparison 176
analytical chemistry; trace analysis; biennial review of techniques 178
manganese; trace analysis 179
heavy metals, speciation; in French, English abstract 189
samples; chlorophyll, -a determinations; sampling, subsampling errors 442
pollution; contaminants, accumulation, transfer, transformation chemistry; multicompartment ecotoxicological models; in French, English abstract 563
sediments; pollution assessment; evolution of concepts and methods; 6 papers; in French, English abstracts 594
light field, underwater; optical properties; volume scattering function, average cosines 702
flagellates, abundance; methods compared 942
fluorescence, improved method; ammonium, concentrations, determining 1307
amino acids, seleno-amino acid determinations 1325
organic matter, freeze-concentration technique for enrichment 1326
and synthetic; temperature, ambient; sulfides, iron, solubility 2560
Nauru Atoll
Pacific, W equatorial; phosphates, origin; in French, English abstract 1373
naval architecture (More at VESSELS ...)
Navier-Stokes equations
fluid dynamics 1249
navigation
channels, maintenance; estuarine waterways, projects; CZM 583
mechanisms; sea turtles; migration, long, oceanic 3164
ship; Global Positioning System, Kalman-filtered fixes 3238
Navy/NOAA Joint Ice Center
role; U.S.; climate; global change, program; ice, regional and global analyses and forecasts 2867
nekton
collection via flume weir; intertidal habitats, vegetated 1627
nekton communities
dynamics; Mississippi, Old Fort Bayou; littoral zone; river-estuarine gradient, along 2238
nekton samplers (More at SAMPLERS ...)
Nematoda
diversity of assemblages along a deep-sea transect; Mediterranean Sea 2268
changes and slow recovery of assemblage; Sweden, Gullmar Fjord Basin; hypoxic water, episode 2706
sulfides, gradient, novel strategy; chemoautotrophic ectosymbionts 2712
Nematoscelis
and Euphausia; Benguela Current, N; Euphausiacea; upwelling ecosystems; diet, feeding, vertical space partitioning 1000
Nemoto: Takahisa
professor of biological oceanography; obituary 609
Neogene
Mediterranean Sea, W; tectonics; paleogeography; problems of palinspastic reconstruction; 12 papers 312
development of the restraining-bend complex; Caribbean Sea, Swan Islands; tectonics; fault zones 840
Greece, Megara Basin; extensional tectonics; sedimentary basins; tectono-sedimentary development 1418
Oligocene; Bering Sea, W, geology; Commander Basin; basin sediments; stratigraphy 1427
North Pacific, NE margin; plate motions; crustal deformation 1481
to Quaternary; North Atlantic; Gorringe Bank; crustal deformation; tectonics 1483
to Quaternary; Mediterranean area; Corinth Basin, Greece; rifting; sedimentation; basins, uplift 2606
Eniwetok Atoll; Pacific, equatorial; biostratigraphy, and paleoenvironments 2607
Late; Foraminifera; Neogloboquadrina, dutertrei; lineage morphometric analyses 2613
-Quaternary; Egypt; Nile Delta, Ras El-Barr well; clay minerals; shales, thermal maturity 3050
Neogloboquadrina
dutertrei; Neogene, Late; Foraminifera; lineage morphometric analyses 2613
neotectonics
fault zones; crust; special issue 2124
Tertiary; Caribbean Sea; Hispaniola; fault zones, Trans-Haitian; tectonics 2128
nepheloid layer (More at LAYERS, PARTICULATE MATTER ...)
neptunium
Irish Sea; coastal sediments 194
Nereis
virens, burrows; Polychaeta; denitrification, and dissolved inorganic nitrogen exchange; direct measurement 466
diversicolor; Polychaeta; sediment-water interface; phosphates, dissolved, effects on exchanges 791
diversicolor; Polychaeta; sediments, contaminated; plutonium, and americium; bioaccumulation; radionuclides 1701
neritic-oceanic interface
communities at; Hawaii, waters around; micronekton 963
Netamelita
2 n.spp.; Caribbean Sea; Amphipoda, gammarid 2292
Netherlands
Wadden Sea; intertidal sediments; denitrificationates, and nitrous oxide fluxes 222
Wadden Sea, and Scheldt Estuary; estuarine nutrients, influence on; intertidal mussel beds 483
suspended matter, distribution; coastal zone 790
tin, butyltins; seawater; biota, effects on 3213
nets (More at SAMPLERS ...)
nets: fishing
and traps; International Whaling Commission, workshop results; Cetacea; mortalities, incidental to fishing; report 1099
nets: towed
plankton pumping systems 1612
network technology
communications; computers 2344
networks: ecological
spatiotemporal patterns, quantifying functional changes 3145
neural networks
computer technology 1719
approach; acoustics, source localization 1872
acoustics; signal processing 2472
techniques; wind, ambiguity removal 2490
Neuse River
Estuary; North Carolina; phytoplankton; nutrients, limitation; seasonal and hydrological control 2226
neuston (More at PLANKTON ...)
neutral surface
analysis; some considerations 2895
neutrino tomography
Earth, density distribution 3123
neutrinos
DUMAND, program; Deep Underwater Muon and Neutrino Detector project report 1063
detecting; seawater, selection of locations with deep water of optimum clarity; DUMAND, project 1759
New Caledonia
off; South Pacific, W; ichnofacies, and recent organism traces; seafloor sediments 1447

New England
estuaries, diked; oxygen, summer depletion 203
intertidal zone, rocky; predation, strong or weak?; generalizing from experiments 2203
New England Seamounts
near; dynamic topography; model and observations compared 2399
New Hebrides Arc
(Vanuatu); South Pacific, W; accretionary wedges; guyots, Bougainville Guyot; collision tectonics; structure of the arc-guyot collision zone 2123
(Vanuatu), central; seismic waves, *P* velocity structures; subduction zones 2652
(Vanuatu); volcanic arcs; magmatism, trough; K-Ar geochronology and petrology 3106
New South Wales
Australia; coral reefs, rocky; humans, as predators, impact 598
New Zealand
Manukau Harbor; water column; light, underwater 1215
Fiji; Tonga; Gnathostomulida 2270
Manukau Harbour; Bivalvia; Crassostrea, gigas, condition cycles; pollution, -related differences 2331
Otago Harbor; seabirds, gulls, foraging; plankton, beach-stranded 3174
Newfoundland
off; Grand Bank; bottom temperature; implications for exchange rates 627
macrozooplankton fauna; comparison in 2 fjords of different physical oceanography 948
12 September 1775; storms, severe; research confirms storm, not earthquake 1108
Bay of Islands, Lewis Hills; mantle, upper, complex structures; ophiolites 1556
Conception Bay; bay circulation; formulation of open boundary conditions at the mouth 1773
NE shelf; frontal oscillations; currents 1817
NE shelf; ice drift; wind, forcing, response to 1846
N, off; Wisconsinan, Late, to present; sedimentation; organic matter; response to climatological events 2035
NE shelf; Eocene, Late; Oligocene; Canada, E; Foraminifera, assemblages; paleoecology 2111
Labrador; shelf macrofauna; functional approach to studies 2244
Bay d'Espoir; fjord fauna, rock wall 2246
Grand Bank, outer; benthic macrofauna; community structure, spatial, post-mortem erosion of 2251
bacteria, responses; temperature; substrates, concentration; plankton blooms, spring 2261
niche<s> (More at ECOLOGY, HABITATS ...)
nickel
phytoplankton growth, colimitation; nitrogen 3159
Niger Delta
Afam clay member; Miocene, lower; Atlantic, E equatorial; delta sediments 1395
Guinea; Gulf of; crust; fracture zones; magnetic field, anomalies 1477
Nigeria
Benue Trough, Abakaliki anticlinorium; magnetic surveys 1466
Nile Delta
Egypt; delta sediments; facies analysis 823
Burullus Lagoon region; Quaternary, Late, evolution; delta sediments; shoreline dynamics 1365
Rosetta-Nile Promontory; Egypt; shoreline dynamics; satellite monitoring of shoreline changes 1366
N plain; Holocene; delta sediments; petrology, distribution, deposition of plant-rich sequences 1367
Holocene; Egypt; Mollusca, faunas, paleobathymetry; delta sediments 1443
Egypt; sediment transport; nearshore patterns 2020
Ras El-Barr well; Neogene, -Quaternary; Egypt; clay minerals; shales, thermal maturity 3050
nitrate reductase
determination, significance; fungi 2761
nitrates
uptake; Dinophyceae; Prorocentrum, minimum; phytoplankton growth 543
rainwater; Gulf Stream; chlorophyll production, enhancement; seawater, surface 2234
phytoplankton, uptake by; iron; rebuttal 2669
kinetics, and shift-up; phytoplankton; upwelling zones ... 3154
nitrification (More at NITROGEN CYCLE ...)
and denitrification; Baltic Sea, inner coastal waters; potential capacities 2755
nitrogen
total; marsh soils; carbon, organic; loss on ignition and Kjeldahl digestion, calibration 171
forms released; sediments, estuarine and freshwater; salinity, effects; ion pairing 219
total; Taiwan Strait, central and northern; sediments, distribution characteristics in; carbon, organic; phosphorus, total; in Chinese, English abstract 288
requirements, contributions of DFAA and ammonium to; bacterioplankton, heterotrophic 492
carbon; phosphorus; biogeochemistry; U.S. report to IUGG 795
assimilation from; detritus, amorphous; fish, *Cyprinodon variegatus*; shrimp, *Palaemonetes pugio* 959
total dissolved and dissolved organic; seawater; vertical distribution 1329
nutrients, status; carbon; sulfur; sediments, recorded in .. 1330
PON; Namibian Upwelling, variability in; particulates; organic matter, POC 1334
assimilation, implication for cycling; phytoplankton; in Japanese, English abstract 1598
carbon; planktonic food webs; size-based dynamics 1604
Skagerrak; plankton, uptake, intracellular storage (nitrate); carbon 1610
sources; amino acids, isotope dilution as tracer; carbon, sources; bacterioplankton, in 1664
North Atlantic, W, over; dimethylsulfide, emissions, seasonal variations; sulfur; atmospheric chemistry ... 1938
colorimetric assays; seawater; microplate readers 1950
British Columbia; Georgia: Strait of; heavy metals, Pb, Zn, Cu, Cd; carbon; sediments, accumulation in 1991
uptake; Greenland Sea; frontal zones; plankton 2216
inputs; coastal zone, waters; atmospheric deposition 2511
organic and inorganic, time-dependent coupling of uptake and regeneration; Chesapeake Bay, plume; regulation by large heterotrophs 2571
supply to the euphotic zone; Benguela Upwelling, system; upwelling, quiescent phase, during 2572
Benguela Upwelling; phytoplankton; upwelling, state variables, short-term variability 2665
cell; chlorophyll pigments; carbon, cell; nannoflagellates, growth rate 2676
inorganic, stocks and uptake flux variability; Scotia-Weddell Confluence; Antarctica 2681
Pacific, equatorial; plankton, nutrition; iron 2690
inorganic; Mediterranean Sea, W; atmospheric deposition 2957
humic acids; carbon; high temperature combustion determinations 2979
particulates; carbon; sulfur; determinations 2995
particulates; carbon; phosphorus; analysis procedures ... 3010
particulates, rapidly sinking; carbon; analytical determinations 3012
particulates, and total mass; carbon; phosphorus 3021
organic; Italy; Venice Lagoon; sediments, and resuspended sediments; carbon, organic; PCBs, contamination, relation with 3038
phytoplankton growth, colimitation; nickel 3159
nitrogen: atmospheric
deposition; Chesapeake Bay, Estuary 1086
nitrogen cycle (See also acetylene reduction, ammonification, denitrification, nitrification, nitrogen fixation ...)
nitrogen fixation (More at NITROGEN CYCLE ...)
cyanobacteria 2312
regulation; Trichodesmium; cyanobacteria 2756
nitrogen limitation
seawater, ecosystems; terrestrial ecosystems 1976
nitrogenase
diurnal activity; North Sea, Wadden Sea; cyanobacterial mats 2775
nitrous oxide
Arabian Sea; water column 1324
dissolved; dissolved gases; automated measurement technique 1962
nodule<s> (See also micronodules ...)
nodules: carbonate
coralline algae; rhodoliths, deep-water, distribution, productivity and growth history 1689
nodules: ferromanganese
and crusts; Indian Ocean, central; fossils, new ichthyoliths . 327
Indian Ocean, central; biogenic influences on growth 426
composition; productivity, ocean surface; seafloor, oxidation rates; relationships 1571

seafloor, distribution on ... 2191
mechanism of formation ... 2192
formation; physicochemical analysis ... 2193
Pacific; Atlantic; Baltic Sea, and the Gulf of Bothnia; Barents Sea; Ce, Nd, Sr isotopic compositions compared ... 3138
nodules: manganese
Atlantic, Madeira Abyssal Plain; abyssal sediments; mechanism of surface retention of nodules during sedimentation changes ... 427
sediments; acoustics, sound scattering ... 1569
Indian Ocean, central basin; sediments ... 1570
Indian Ocean, central basin; internal constitution ... 2659
Pacific, NE equatorial; origin, distribution; in In Korean, English abstract ... 2660
North Pacific, W; bacteria, abundance ... 2662
South Pacific, SW equatorial; islands, EEZs ... 3139
Clarion Fracture Zone; Clipperton Fracture Zone; formation, growth ... 3143
noise (More at SOUND ...)
field, laterally-coherent mesostructures; acoustics ... 98
ambient; Arctic Ocean; acoustics; automatic extraction of springtime transients ... 104
emissions returned by a wavy surface, correlation; acoustics ... 1221
ambient; acoustics, signals; interactions ... 1223
ambient, coherent and diffusive fields; acoustics ... 1224
ambient; acoustics, local source; interaction of power flows ... 1864
noise: seismic
spectra; microseisms, storm- ... 404
North America
Holocene; climate; salinity; reconstruction of past changes using diatom-based transfer function ... 836
Arctic Ocean, shelf; shelf communities; benthic ecology; invertebrates, benthic ... 2242
coast and shelf; shelf sediments; lignin, geochemistry ... 2582
North American Cordillera
Tertiary, Mid-; magmatism; plate tectonics; 29 papers ... 856
North American Plate
Caribbean Plate; plate tectonics, kinematic models; plate boundary zone ... 363
plate tectonics; deformation, dynamics ... 368
active fragmentation; Mexico, off Manzanillo; plate tectonics; triple junctions ... 1478
North Atlantic (More at Atlantic ...)
NW; Gulf Stream; Cape Hatteras, N of; currents; water masses ... 35
NE; Rockall Bank; basement rocks; geochemical and isotopic constraints on rock nature and age ... 293
SE; hotspot volcanism, Canary; crust, off Morocco, effects on ... 383
W coast; Mollusca; Cyclope, neritea, spread; relation to oyster culture and climatic fluctuations ... 505
W; Foraminifera, benthic, morphology and microhabitat preferences ... 522
Foraminifera, planktic; water masses, indicators ... 525
and elsewhere; Echinoidea; Diadema, antillarum; mass mortalities; report ... 618
oxygen, fluxes; nutrients, fluxes; heat, and mass, budgets ... 628
E; Iberian Peninsula; Lagrangian circulation; coastal zone, transition; currentsbservations ... 639
E; Cape Verde Frontal Zone, characterized; water masses; fronts ... 678
E; eddies, Lagrangian observations; observations of 2 counter-rotating eddies ... 721
W; sediment transport, mass movements; slope, and rise; submarine processes ... 830
Madeira-Tore Rise; crust, structure; seamounts, Josephine Seamount ... 899
primary production; remote sensing, basin-scale estimates ... 946
surface waters; phytoplankton; carbon, budget, role in ... 952
NW; Georges Bank, scallop grounds; benthic invertebrates, mega-, assemblages; environmental factors affecting faunas ... 984
SW; Yucatan Peninsula, off; Isopoda, cirolanid; Bathynomus, giganteus, biology ... 1002
NE; Rhizopoda; Xenophyophoria, 7 taxa; abyssal communities, sediment ... 1015
U.S. coast; Cetacea, bottlenose dolphins; chemical residues ... 1040
Antarctic Bottom Water, flow; abyssal gyres ... 1133
NE, East Thulean Rise; eddies, field of flow; buoys, drogued, drift pattern ... 1160
Beaufort scale, equivalent; wind statistics, effects on; air-sea interactions, fluxes ... 1253
Pleistocene, during last glacial maximum; surface salinity ... 1424
deglaciation; glacial meltwater, discharges; deep circulation; climate change, abrupt, 15-10 kyBP ... 1432
Coastal Plain; Cretaceous-Tertiary boundary, across; extinction, selective, and survival; fossil record ... 1448
W; Paleocene, Late; Baltimore Trough; sediments, stratigraphy; paleoceanography; in French, English abstract ... 1454
E margin; Goban Spur; Galicia Bank; lithospheric heat flow, variations ... 1474
Neogene, to Quaternary; Gorringe Bank; crustal deformation; tectonics ... 1483
Gorringe Ridge; tectonics, and geological structure; surveys, analysis ... 1561
W subtropical; circulation; currents, seasonal variations; volume transport ... 1768
circulation, seasonal variability; model comparison ... 1772
circulation; wind; time and space scales of mesoscale variability ... 1780
near-surface; equatorial circulation, tropical ... 1783
circulation, wind- and buoyancy-driven ... 1786
Georges Bank; tidal currents, interactions; eddy flux, skew eddy fluxes ... 1804
W tropical; North Equatorial Countercurrent; baroclinic tides ... 1821
W; sulfides; radon; atmosphere; seawater ... 1936
W, over; dimethylsulfide, emissions, seasonal variations; sulfur; nitrogen; atmospheric chemistry ... 1938
over, Dakar to Woods Hole; atmospheric chemistry; precipitation, chemistry ... 1939
Pliocene; Ostracoda; paleoceanography, shallow-water; fossil record ... 2085
Pliocene, during; surface temperature ... 2090
Bivalvia; Brachiopoda, migration; climate change, response to ... 2105
E, DSDP sites 548A, 549, 551; Campanian-Maastrichtian boundary; Germany, NW, Lagerdorf-Hemmoor; biostratigraphy, correlation; paleobiogeographical and -oceanographical implications ... 2109
Pleistocene, last glacial; thanatocoenoses, submerged; fossil record, southward faunal shifts ... 2110
central; Kane Fracture Zone; basement, depth to; geoid, expression ... 2116
Krylov Seamount; ferromanganese crusts; origin, mineralogy, geochemistry ... 2194
W; fish, temperate and tropical deep-sea; feeding ecology ... 2235
W, slope and rise; Polychaeta, 2 n.gen., 14 n.spp.; Ophryotrocha, generic revision ... 2265
Radiolaria, distribution; sediments, surface layer ... 2298
particulates, sinking; seasonal and depth-related changes in source ... 2573
Albian, Late, to Early Turonian; Foraminifera; fossil record; paleoslope model ... 2618
Acari; Halacaridae, identification ... 2780
warm waters; Euphausiacea, spp., distribution ... 2808
Laminaria, longicruris, refugial role; kelp communities; sea urchins, reduction in grazing ... 2829
dynamic topography; remote sensing, Geosat radar altimetry; FASINEX data ... 2900
circulation, interpentadal changes diagnosed ... 2902
eastern basins; tidal currents ... 2905
North Sea; wave climate, changes; increases in mean wave height since 1950 ... 2912
tropical, subtropical; surface temperature, anomalies; atmospheric pressure, variations; relations ... 2955
variability over; atmospheric optics, properties; in German, English abstract ... 2960
N; particulates; suspended matter, and sinking; sampling and analysis ... 3027
North Sea; PCBs; seawater; in German, English abstract ... 3043
Canary Islands; mantle, shallow, enriched; volcanic rocks, compositions ... 3117
Trichodesmium, major role; cyanobacteria; nutrient cycling ... 3153
mixed layer, dynamics; phytoplankton, abundance; nutrients, cycle; meridional variability of the seasonal cycle; in German, English abstract ... 3163
SE; Morocco, coast, distribution along; Bivalvia; Donax, truncules, venustus; in French, English abstract ... 3181
Caribbean Sea; Decapoda, shrimps; Pasiphaeidae, including 1 n.sp. ... 3188
North Carolina
South Carolina; hurricanes, Hugo, landfall; surface wind, distribution ... 1292

Neuse River, Estuary; phytoplankton; nutrients, limitation; seasonal and hydrological control 2226
Pamlico River; Brachyura; Callinectes, sapidus, microhabitat selection by premolt and molting crabs 2820
North Equatorial Countercurrent
North Atlantic, W tropical; baroclinic tides 1821
North Equatorial Current Trans-Atlantic Research (Use NECTAR)
North Fiji Basin
metalliferous sediments; accumulation rates, chemical partitioning, Q-mode factor analysis 3053
Ridge; Pacific; hydrothermal vents; geology, geochemistry 3057
Pacific; tectonics; magmagenesis 3108
South Pacific; spreading centers, petrology, geochemistry; magma, sources 3115
South Pacific; spreading centers, geological structure 3129
Pacific; hydrothermal deposits; ferromanganese oxides 3142
North Pacific (More at Pacific ...)
W; water masses; carbonates, geochemical system, as descriptor and differentiator 37
2 sites; acoustic backscattering; angular dependence 87
surface temperature; atmospheric waves, PNA; interactions 142
atmospheric oscillations, intraseasonal; cumulus convection, tropical; ocean-atmosphere interactions 147
NE, off U.S. coast; air, marine, composition; atmosphere ... 160
over; dimethylsulfide; clouds, condensation nuclei; correlations 162
carbonate dissolution, rates; carbon decomposition, organic 217
Juan de Fuca Ridge; sediments, hemipelagic; hydrothermalism; interactions 302
NE; Juan de Fuca Rift, zone; hydrothermalism; radon, in bottom waters 305
NW; Pleistocene, Mid-; Ryukyu Arc; corals, ESR ages ... 315
Okinawa Trough; lithospheric heat flow 344
NW; Okinawa Trough; volcanic rocks; petrology, geochemistry 384
NW; Kamchatka; volcanics, alkali, subalkaline, origin of .. 394
W, summer '89, distributions; cyanobacteria; picophytoplankton 450
Oncorhynchus, spp.; salmon migration; models of orientation and navigation at sea 458
NE; San Juan Islands; algae, subtidal, encrusting; distribution, thickness patterns 530
hydrographic surveys; gyres, subtropical, along 24°N 629
47°N, 152°W; CTD, and oxygen, nutrient profiles; water column, properties 631
Hawaiian Ridge, effects of; flow; thermohaline structure; circulation 645
E; baroclinic transport; annual and interannual variability across Line P 646
circulation tracers; tritium, bomb-produced; two decades of mixing 647
XCP section across 25°N; currents; eddies 660
water masses, anomalous, Okhotsk Sea; ventilation, implications 676
Axial Seamount, June 1988; temperature, anomalies; acoustics, a search for signals 718
E; hurricanes, 1990 season 758
W; Holocene, emergent limestone; Mariana Islands; reef sediments; facies development model 820
W; Pleistocene, Late; continental climate; paleoceanography, oceanic variability; sediments, recorded in ... 838
W; Mariana Arc, forearc; crustal accretion; tectonics ... 839
NE; Juan de Fuca Ridge, Cleft segment geology; seafloor spreading; lava, recent flows; hydrothermal plumes, mega- 873
central gyre; primary production; subtropical gyres 934
primary production; atmospheric iron, deposition; phytoplankton, responses 955
NE; Fieberling Seamount, around; flow, mesoscale; water column, thermohaline structure 1134
W; Seto Inland Sea; Japan: Sea of; Bering Sea; molybdenum, dissolved, distribution 1314
NE margin; Neogene; plate motions; crustal deformation 1481
NE, Heck and Heckle seamounts; seamounts, off-ridge; basalts, primitive and highly depleted MORB 1501
West Philippine Basin; mantle, constituents, measurements and modelling 1524
W; seismic tomography, imaging; subducted lithosphere; island arcs, beneath 1559
NE; Juan de Fuca Ridge, West Valley segment; magma mixing; mantle, heterogeneous, evidence for 1560
NE, coastal marshes; Gastropoda; biological invasions; snails, native vs introduced, interactions 1577
Subtropical Gyre; productivity, gross; community production; oxygen, respiration; in-vitro and in-situ rates .. 1620
35°N; heat flux, meridional 1765
surface temperature; seasonal fluctuations in the open ocean 1766
wind stress curl, variability; ocean-atmosphere interactions 1909
and adjacent seas; lipids, dissolved and suspended; surface, waters 1971
W; chemical pollution 1998
Pliocene; Pleistocene; paleoclimate, evolution; fossil record 2099
Central Gyre; ocean-atmosphere interactions, impacts; phytoplankton communities, dynamics 2210
subarctic; phytoplankton growth, limited; iron, deficiency, by 2218
Mariana Islands; Brachyura, majid; Bothromaia, griffini n.gen., n.sp.; Homoloidea, poupiniid; Poupinia, hirsuta, remarks on 2294
W; Amphipoda, hyperiid; Physosomata; Scina, 4 n.spp. .. 2297
subtropical; Sargasso Sea; Anguilla, rostrata, A. japonica; eels, spawning areas; expedition reports 2385
E; biogenic particulates; microbiota, associated; biogeochemical cycling, productivity implications 2578
W; Quaternary, Late; Ryukyu Trench, slope; sediments; paleoceanography, record 2611
Hawaii, SE of; abyssal basins; geophysical studies 2654
W; manganese nodules; bacteria, abundance 2662
W, 1964-82; heat, content changes; upper ocean 2896
W; Mariana Trough; sedimentation; in Chinese, English abstract. 3052
NW; Ryukyu-Kyushu Arc; earthquakes; plate boundaries, thermomechanical state; arc tectonics 3119
North Pacific Experiment (Use NORPAX)
North Pacific Oscillation
observations; circulation, GCM simulations; atmospheric oscillations; comparison 2521
North Sea
N; circulation 19
Jade region; sand flats; surface moisture; pore water; salinity; in German, English abstract 192
Dogger Bank area; trace metals, dissolved and particulate; surface, waters 229
East Shetland Platform; shelf sediments; distribution of granite and possible Devonian sediments 284
central; infauna; epifauna 467
salinity, high; circulation, possible changes; exceptionally saline inflows 614
waves, surface, refraction; numerical simulations 688
over, airplane investigations; convective cloud bands 756
English Channel; atmospheric aerosols; particles, chemistry, source 773
particles, ultrafine; clay minerals; STM and AFM investigations 825
earthquakes, micro-; seismic waves, arrival time inversion . 883
earthquakes, micro-; seismic waves, arrival times 884
Clupea, harengus (herring); fish larvae, growth; regional and seasonal differences from otolith analysis 962
nannoplankton; flagellates, nanno-, benthic heterotrophic; algal sedimentation, response to 967
bacteria, S-reducing thermophilic; oil fields, waters 991
fish recruitment; petrochemical plants, around 1039
S; Pliocene, to Quaternary; lithosphere, dynamics; basin subsidence 1535
petroleum, reservoirs, production, projections 1568
Coccolithophoridae, sedimentation and transport 1693
Eldfisk Field; chalks, sedimentology; sediment diagenesis . 2058
central; Cretaceous, Early to Mid-; lithostratigraphy; sediments 2084
Kattegat; Cetacea, spp.; Phocoena, phocoena; mercury, contamination 2322
concentrations in; chemical pollution; tankers, operational discharges from 2358
tidal fronts, mixing; flow, residual and tidal 2427
hydrocarbons, fraction; atmospheric particulates; distribution, origin 2553
Beryl Embayment; Jurassic, Lower; sediments, coastal plain and fan delta, evolution 2590

Lulu-1 wells; salt diapirs; velocity assessment 2593
Baltic Sea; bacteria, hydrocarbon-degrading; petroleum biodegradation; distribution, activity 2722
microbial mats, influence; metals, heavy, gradients; interstitial water, intertidal 2766
Wadden Sea; cyanobacterial mats; nitrogenase, diurnal activity 2775
North Atlantic; wave climate, changes; increases in mean wave height since 1950 2912
North Atlantic; PCBs; seawater; in German, English abstract 3043
Kimmeridge Clay Formation; sediment diagenesis, mudrocks 3055
S; seismic waves; observations of shear-wave splitting from VSPs 3113
North Sea Task Force
environmental monitoring; the first two years 1074
North Sea Wave Model (More at WAVE DYNAMICS ...)
North Seaoast, and the Steinhuder Meer
halophilic bacteria, and halotolerant 2749
North-east Atlantic Dynamic Studies (Use NEADS)
Northern Hemisphere
Pleistocene; glaciationimulation of the last cycle; climate 130
atmospheric circulation; surface temperature, sensitivity to 144
140 kya; deglaciation, major; atmospheric moisture, deficit 316
air temperature, surface; observed records compared 735
Southern Hemisphere; tropospheric water; wintertime asymmetry 1255
Southern Hemisphere; biological invasions; fossil record; biotic interchanges; consequences 2202
Northwest African Upwelling (See also Canary Current Upwelling ...)
Norway
Oslofjord; fjord sediments; diagenesis, amino acid-, organic C and N mineralization 282
67-71 N; slope sedimentation 1408
Frohavet area; shelf sediments; structure and seismic stratigraphy 1419
off, 62-70 N; crust, structure; margin 1547
status in; Pinnipedia, harbor seals; Phoca, vitulina 1624
S; Framvaren Fjord; hydrogen sulfide; oxidation 2581
central; shelf sediments; kaolinized, K-leached zones 3051
shelf; oil, -source rock correlations; sediments, biomarkers .. 3136
surface temperature; remote sensing; aquaculture, planning, for 3252
Norwegian Sea
-Greenland Sea; sediments; organic matter; analysis at a glacial-interglacial boundary 280
Greenland Sea; rifting; seafloor spreading, asymmetric; tectonics 860
satellite altimetry; signal processing 1123
radiation, UV-B, penetration 1258
Greenland Sea; circulation; wind; salinity, the Great Salinity Anomaly in the 1970s; numerical experiments 1779
Greenland Sea; circulation, numerical model 1788
in autumn; Pteropoda; sedimentation 2208
Arctic Ocean, from; Greenland Sea; Iceland Sea; saline outflows; water masses, deep water formation 2419
-Greenland Sea; Foraminifera; bacteria; sediments, deep-sea; distribution of hydrolytic activity 2754
Greenland Sea; Kolbeinsey Ridge; Vesterisbank Volcano; Polarstern investigations of sediments, bathymetry; in German, English abstract 3235
Notopontonia
platycheles n.gen., n.sp.; Australia, South; Pontoniinae; Pontonia, pinnophylax, type species 2800
Nova Scotia
off; Quaternary, Late; Canada, E; shelf sedimentation; sea level, changes 2056
Polysiphonia, lanosa; kelp; ecology, distribution 2304
crust; mantle, upper; margin, seismic profile across 2646
Nucella
lapillus; Gastropoda; recovery in populations suffering from imposex 1032
lapillus; Scotland, St. Andrews coast; Gibbula, cineraria; Asterias, rubens; epifauna, developing assemblages; grazers, effects of; recruitment, of epifaunal invertebrates 3172
lapillus; Scotland, lochs; Gastropoda; tin; tributyltin, mariculture-related 3202
lapillus; Scotland, oil ports; Gastropoda; tin; tributyltin, impacts from large vessels 3205
lapillus, imposex in; Gastropoda; tin; tributyltin; geographic uniformity of response and effects 3206
lapillus, imposex in females; Gastropoda; tin; tributyltin; steroid titers 3215
nuclear power plants (More at POWER ...)
nuclear waste (See also radioactive waste; fallout; more at RADIOACTIVE MATERIALS, WASTE ...)
nunataks
inland, to; Antarctica; seabirds; guano, nutrient supplies; effects of ornithogenic products on ecosystem structure and functioning 1649
nutrient<s> (More at TROPHIC DYNAMICS ...)
nutrient chemistry
Guam, coastal waters 785
nutrient cycling
North Atlantic; Trichodesmium, major role; cyanobacteria 3153
nutrient flux
sediment-water interface; microphytobenthos, influence 1698
nutrients
particulate and dissolved, diagenesis and export; Papua New Guinea, Fly Delta; intertidal mudbanks, role 208
dissolved, and preformed; Mediterranean Sea, SE; elements, ratios 209
implications for benthic cycling; sediments, aquatic; salinity, effect of; ammonium, sorption 210
oceanic distribution; Mesozoic, Late; Cenozoic, Early; oxygenation; water masses, limits on warm saline bottom water formation 313
Mediterranean Sea, Iroise Sea; productivity; stratified ecosystems, shallow 436
Australia; Bass Strait, cascade; shelf-break fronts; plankton 440
phytoplankton; eddy diffusion; estimating coefficients ... 451
phosphorus-limited conditions; Chaetoceros, sp, effects on; seawater; mercury pollution; in Chinese, English abstract 569
N, P; German Bight; Kiel Bay; plankton; hypoxic water, conditions 577
fluxes; North Atlantic; oxygen, fluxes; heat, and mass, budgets 628
long-term changes; Baltic Sea; elimination of seasonal variation from data 783
seawater; ICES intercomparison exercise results 784
distribution, effects; California, N, coastal transition zone; current transport; phytoplankton, biomass, species composition; primary production 925
reserves, long-term changes in; Finland: Gulf of, W; productivity, pelagic, changes in 931
cycling; Georgia Bight, Gray's Reef; benthic communities; metabolism 975
effects of enrichment; microalgal communities, benthic; community composition in shallow water 1026
status; carbon; nitrogen; sulfur; sediments, recorded in .. 1330
particulate organic, biologically imported; detritus; food webs, importance in; reef communities 1340
water column; Thalassia, testudinum; seagrass biomass, and productivity; epiphytes, levels; relationships; field observations 1691
concentrations; estuaries, and shallow seas; alkalinity; colloids, and HMW dissolved material, contributions 1974
profiles; pore water; deltaic lagoons; benthic fluxes 1975
limitation; North Carolina; Neuse River, Estuary; phytoplankton; seasonal and hydrological control 2226
intertidal communities, structure; guano, seabird, variable consequences of 2253
soil; keystone species; mangrove forests, dynamics; productivity; crabs, burrowing, influence 2254
estuaries; chlorophyll; watershed discharges, variations, effects 2377
distribution; India; estuaries, Periyar River 2569
export; Long Island Sound; estuaries, to; watersheds, from 2570
influence; bacterial production 2745
availability; microbial communities, deep-sea 2746
supply, controlling mechanism; Adriatic Sea, N; phytoplankton 2983
load and trend; Wadden Sea, ecological state; eutrophication 3147
Europe, NW, Armorican Shelf; phytoplankton; spring evolution; in French, English abstract 3157

cycle; North Atlantic; mixed layer, dynamics; phytoplankton, abundance; meridional variability of the seasonal cycle; in German, English abstract 3163
uptake; microphytobenthos; microalgal growth 3200
nutrients: estuarine
influence on; Wadden Sea, and Scheldt Estuary; Netherlands; intertidal mussel beds 483

oblique spreading (More at SPREADING ...)
ocean (See also COASTS, CURRENTS, FRONTS, GRADIENTS, INTERFACES, LAYERS, Secchi depth, SOFAR channels, sound channels, STRUCTURE, surface-, upwelling, water masses, ZONES; more at WATER ...)
ocean: abyssal
electrical field, Schumann resonances 82
ocean bottom seismometers
facilities; a 4-institution consortium of 2 facilities 2866
ocean dumping (More at DUMPING ...)
of contaminated wastes; metals, enrichment factors 1356
dredge spoils disposal, regulation 1730
Law of the Sea; hazardous waste; transboundary movement 1736
Canada, E; trawling, effects; dredging, effects; shelf 2360
ocean ecology
fisheries, harvesting by, impact; editorial 599
ocean engineering
instrumentation; offshore technology; overview articles; 11 papers 1077
ocean floor (More at FLOOR ...)
ocean fronts (More at FRONTS ...)
ocean geography
World Ocean; history of research and findings, individual regions portrayed; special volume; in French, English abstract 1067
ocean research
potential for use in; centrifuge modelling 576
ocean resources (More at RESOURCES ...)
Ocean Seismographic Network
site preparation; seafloor; seismic surveys, future; ODP Leg 136 initial report 2862
ocean: stratified
Rossby waves; analysis 1182
ocean surface (More at SURFACE ...)
ocean thermal energy conversion (Use OTEC)
ocean: upper
Hudson Bay; sea ice; variation of upper layer dynamics during seasonal breakup 2460
North Pacific, W, 1964-82; heat, content changes 2896
ocean waste disposal
U.K., monitoring programs, impact assessment, disposal licensing, etc.; pollution monitoring; contaminants, non-radioactive; MAFF report 1988-89 1088
ocean-atmosphere interactions (More at AIR-SEA INTERACTIONS ...)
climate, model stability, variability; circulation, general; results of 100-yr simulations 132
wind, forcing by; circulation, quasi-geostrophic response ... 141
Pacific, tropical; atmospheric circulation, response; surface temperature 143
North Pacific; atmospheric oscillations, intraseasonal; cumulus convection, tropical 147
climate change; circulation, general; heat transport fluctuations vs greenhouse effect 612
Indian Ocean, E; mixed layer, modelling 745
circulation; dynamic topography; large scale oceanic responses to atmospheric forcing at low frequencies 749
monsoon year, proposed as concept; tropics; climate, unit year of climate anomalies 1270
atmospheric circulation; ENSO predictability 1272
oscillations; convergence, feedback 1275
model sensitivity to variations in input data 1278
atmospheric oscillations, meridional; uncoupled modes 1279
carbon cycle; oxygen cycle; silicate weathering, importance as control 1350
global warming; atmospheric carbon dioxide, increase; GCM simulations analyzed 1747
North Pacific; wind stress curl, variability 1909
atmosphere; typhoons, zone, in 1911
tropical cyclones, moving; mutual response 1913
Pacific, W tropical; monsoon circulation; generation of the Mindanao Dome 1914
California: Gulf of; surface temperature, variability; tidal and atmospheric forcing of the upper ocean 1915
El Niño, ENSO cycle; circulation, ocean and air; weather . 1918
impacts; North Pacific, Central Gyre; phytoplankton communities, dynamics 2210
Bengal: Bay of; circulation, remote forcing 2409
circulation, general; Southern Oscillation 2525
Antarctica; Southern Hemisphere, circulation sensitivity; ice leads, pack 2933
surface temperature, response; El Niño, 1986-87 ENSO ... 2956
Australia, NNE of Townsville; heat flux, derivation 2958
coupled model; atmospheric carbon dioxide, gradual changes; model transient responses 1277
oceanic boundary layer (More at BOUNDARY LAYERS ...)
oceanic circulation (More at CIRCULATION ...)
oceanic electric field<s> (More at ELECTRIC FIELDS ...)
oceanic heat fluxes (More at heat ...)
oceanic plateaus
oringin; Ontong Java Plateau; Manihiki Plateau; mantle plumes 1538
mantle plumes; flood basalts; volcanism, initiation of, model 2146
oceanic temperature (More at TEMPERATURE ...)
oceanographic apparatus (See also BUOYS, DROGUES, fish (towed), FRAMES, GAUGES, hydrophones, METERS, pingers, profilers, RECORDERS, SAMPLERS, seismometers, sonar, TANKS, towing, transducers; more at REMOTE SENSING, satellites, STRUCTURES, vehicles, VESSELS ...)
oceanographic data
assimilation; geostrophic flow, quasi-; optimal interpolation, model 622
signal processing; interpolation method for ocean and estuarine studies 1060
Southern Ocean; examination of several data sets 1066
oceanographic research
remote sensing; instrumentation, surface and water column; current and future observing systems 1072
cooperation in; U.S.; U.S.S.R.; special issue; educational ... 1741
oceanographic surveys
India, E, off; 1960 literature survey translated 2394
oceanography
measurement science; meteorology; review of education in observational techniques; national facilities 610
atmospheric research; instrumentation, and observational systems; national facilities and needs 1720
oceanography: history of
Reid: Joseph L.; tribute 1110
Revelle: Roger; tribute 2376
oceanography: optical
global surveys of bio-optical properties 2936
oceans (Southern Ocean and World Ocean are used in this index; North Atlantic, South Atlantic, North Pacific, South Pacific, Indo-Pacific and circum-Pacific are used as well as Atlantic and Pacific; in addition to searching under an ocean name, search narrower geographic, physiographic and zonal designations; if searching a near-shore area use country and continent names too ...)
continents; magnetic field, mean contrasts 337
magnetic field, anomalies; continents; crust; meeting collection; 17 papers 343
hydrographic modelling; estuaries; an equation of state for numerical models 621
global measurements; toward a global ocean observing system 1050
circulation modelling; atmosphere; computational dispersion properties of horizontal staggered grids 1053
water bodies, emission spectra; seas; brightness, spectral coefficients; possible applications to remote sounding 1124
Ocypodidae
South Africa, E coast; Brachyura; ghost crabs 2812
odor plumes
chemical sensors; instrumentation, submersible 1304
offshore (More at INDUSTRY ...)
offshore drilling (More at drilling ...)
offshore petroleum
U.K., activities; oil; gas 1563

industry; Australia; environmental protection 1732
offshore platforms (More at platforms ...)
drilling, from; Beaufort Sea; sound, underwater, measurements; acoustics 712
wave forces, measured and predicted 1723
offshore structures (More at STRUCTURES ...)
offshore technology
ocean engineering; instrumentation; overview articles; 11 papers 1077
oil (More at HYDROCARBONS, ORGANIC COMPOUNDS, PETROLEUM ...)
and gas accumulation; margin sediments; tectonics, aspects 423
U.K., activities; offshore petroleum; gas 1563
source rock potential; Korea, W Korea Bay Basin; hydrocarbons 2188
Canada; Arctic area; shelf exploration; engineering, concerns 2354
U.S.; petroleum potential, future supply; gas, natural 2874
-source rock correlations; Norway, shelf; sediments, biomarkers 3136
oil: crude
evaporitic; microbial degradation 550
characterization for environmental purposes 800
oil exploration (More at exploration ...)
oil fields
waters; North Sea; bacteria, S-reducing thermophilic 991
Mexico; Gulf of; Campeche Bank; bacteria 1659
offshore; Australia, NW, off; environmental monitoring . 1734
oil platforms
around; Brazil, Rio Grande do Norte; zooplankton 2693
oil pollution (See also blowouts, slicks; more at POLLUTION ...)
estuarine; intertidal sediments; long-term chemical assessments 805
Antarctica; penguins, effects on energy metabolism and physiology 1700
oil production (More at POWER ...)
oil slicks
microbial degradation; enhancement using slow-release fertilizer; in Chinese, English abstract 591
oil spills
risk modelling 592
major; Caribbean area; Panama, coast; corals, reef-, subtidal; short-term ecological consequences 1035
chemical dispersion; droplet size distributions, mathematical model 1085
Alaska; Prince William Sound; bioremediation, efforts, results of; Exxon Valdez 1726
Alaska; Prince William Sound; Exxon Valdez; bioremediation, and other strategies; situation update 1727
Arctic area; burning, proposed as possible cleanup technique; report 1755
Alaska; Prince William Sound; bioremediation, effects; mutagenicity, on; Exxon Valdez 2356
treatment; effectiveness testing of treatment agents 2357
Kuwait, Al Ahmadi, as origin; India, response, concerns 2363
simulations; Europe, NW; tides; EUROSPILL databases ... 3242
simulations; circulation, tidal and residual; EUROSPILL databases 3246
oil tankers (More at TANKERS ...)
Okhotsk: Sea of
sediment-water interface; carbon, exchange 1344
Kamchatka, and Paramushir Island, off; gas hydrates; sediments 1399
Kurile Basin, origin 2173
Paramushir Island, off; metals, anomalous behavior; gas vents 2186
Cephalopoda; general distribution and zoogeography 2237
Okinawa Trough
North Pacific; lithospheric heat flow 344
North Pacific, NW; volcanic rocks; petrology, geochemistry 384
sediment transport, lateral; radionuclides, natural, as tracers 1332
Okusa: Shigeyasu
geotechnical engineering professor; obituary 607
Olga Basin
shallow bedrock geology; Barents Sea, NW; crust 277
Oligocene
and Miocene sediments; Indo-Pacific; Foraminifera, benthic; Pleurostomella, concava n.sp. 328
Earliest; Southern Ocean; surface cooling, abrupt, evidence for 844
Neogene; Bering Sea, W, geology; Commander Basin; basin sediments; stratigraphy 1427
Eocene; Southern Ocean, Atlantic sector; paleoceanography; ODP sites 689B and 690B 2087
Eocene, Late; Canada, E; Newfoundland, NE shelf; Foraminifera, assemblages; paleoecology 2111
Aden: Gulf of, Mid-Oligocene; Red Sea, S, Late Oligocene; rifting 3088
Oman
coastal waters; Persian Gulf; seawater; sediments; biota, oysters; hydrocarbons, content 1083
beaches; tar 2355
Oman: Gulf of
Arabian Gulf; phytoplankton, distributions; environmental conditions September 1986 2678
Oncorhynchus
spp.; North Pacific; salmon migration; models of orientation and navigation at sea 458
online databases
Internet, sharing data over; research institutions, linking .. 1718
Ontong Java Plateau
Manihiki Plateau; oceanic plateaus, oringin; mantle plumes 1538
Aptian; Indian Ocean; mantle plumes; volcanism, flood basalt 2148
Pleistocene, Late; Pacific, W equatorial; carbonate sediments 1442
ooze (More at SEDIMENTS ...)
ophiolites (More at IGNEOUS- ...)
Tyrrhenian Sea; Alps, western; crust 896
lithosphere, oceanic; symposium papers; 8 papers 897
Cyprus; Troodos; crust, fossil ore bodies 1531
Cuba, E 1541
Newfoundland; Bay of Islands, Lewis Hills; mantle, upper, complex structures 1556
Trinity; California; crust, fossil slow-spreading center; hydrothermalism; isotope evidence for multistage hydrothemal alteration 2077
formation; Bay of Islands; subduction zones, above; geochemical evidence 2641
on land; crust, oceanic; report 2889
ophiolitic ores (More at ORES ...)
Ophiuroidea
deep-sea infaunal; Japan; Suruga Bay, photographic observations 465
Ophryotrocha
generic revision; North Atlantic, W, slope and rise; Polychaeta, 2 n.gen., 14 n.spp. 2265
optical oceanography (More at LIGHT, seawater ...)
global surveys of bio-optical properties 2936
optical phenomena
atmosphere; light; color; review collection; 23 papers 775
optical properties
light field, underwater; natural waters; volume scattering function, average cosines 702
optics: atmospheric
properties; North Atlantic, variability over; in German, English abstract 2960
optics: seawater
Antarctic Peninsula, around; bio-optical properties 1214
irradiance, measurements; absorption and scattering estimates 1257
oral reefs
Caribbean Sea; reefs: coral; diseases, Black Band Disease 2784
Orchomene
plebs; Amphipoda, Antarctic; bioassimilation; chemicals, HCH, HCB 2317
ore (More at MINERAL RESOURCES ...)
ore deposits
sediments; oceanic cycles as control 615
Oregon
S, beneath; Juan de Fuca Plate; seismic tomography; lithosphere 2645
ores
polymetallic, formation; seawater, major ions, role; copper, sorption by Mn-oxyhydroxides 913
organic chemicals
benthic fauna; effects of linear alkylbenzene sulphonate 556
mineralization, in seawater; microbial communities 2778
organic coatings
study methodology; particulates, aquatic 782

organic compounds (See also ectocrines, HYDROCARBONS, sterenes, sterols, wax esters, yellow substance ...)
organic compounds: halogenated
biodegradation; hydrocarbons 545
organic debris
particulates; margin sediments, contributions to 1328
organic films
monomolecular, effect of; wind waves 1188
organic matter (See also humus ...)
dissolved and complexing; seawater; measurements, methods, ecotoxicology; in French, English abstract 168
Pacific, equatorial, along 135°N; particulates; chlorophyll; surface layer 207
Norwegian Sea, -Greenland Sea; sediments; analysis at a glacial-interglacial boundary 280
pristane/phytane ratio; sediments; geochemical significance; in Chinese, English abstract 287
net production; Baltic Sea, and adjacent regions; air-sea interface; oxygen, fluxes 781
Southern Ocean; Drake Passage; particulates; carbon isotopic variations 789
degradation, as a function of; sediments; copper, extractability 793
Quaternary; sediments; seawater; carbon, isotopic record, variations 842
DOC, high turnover rates; phytoplankton blooms, during .. 936
freeze-concentration technique for enrichment; natural waters 1326
tracers; sediments; particulates, settling; omega-oxoacids, implications for transport of photooxidation products to deep-sea environments 1327
POC; Namibian Upwelling, variability in; particulates; nitrogen, PON 1334
production; Antarctica; Bransfield Strait; particle flux; seasonal coupling 1337
composition, fate; submarine caves; sediments 1346
DOC; photochemical degradation; carbon cycle, oceanic, impact on 1348
enrichment, effects; estuarine macrobenthos 1638
marine, effects of; bursting bubbles; aerosols, sea-salt 1944
carbon cycle, oceanic; chemical studies; lecture 1967
dissolved; Japan: Sea of, Amur Gulf, Razdolnaya Estuary; biogeochemical behavior 1968
dissolved; carbon; calculated vertical profile in the ocean 1969
dissolved, export; mangrove ecosystems, from; evidence ... 1970
characterization; Australia, Sydney; air-sea interface; water column, subsurface; sediments; sewage outfalls 1972
sources; Canada, E, Scotian shelf; shelf sediments, and slope 1973
DOC; mercury, methylmercury formation; sediment-water interface, partitioning at 1993
California, Palos Verdes shelf and Santa Monica Bay; sediments; toxicities, profiles; contaminants, chemical 1996
Wisconsinan, Late, to present; Newfoundland, N, off; sedimentation; response to climatological events 2035
sediments, preservation in; chlorophyll pigments 2053
benthic carbon degradation; Pacific, central equatorial; biogenic silica, dissolution 2580
dissolved; bacteria, uptake by; flow, effect of fluid motion ... 2752
microbially-synthesized aggregates, ingestion; Harpacticoida; fecal pellets, egestion 2765
terrestrial DOM; U.S., SE; shelf, distribution on 2982
dissolved; bacteria; viruses; particulates; filtration, ultra-particulates; lignin, cutin, amino acid, carbohydrate analyses . 3005
characterization; particulates; workshop report 3015
dissolved; phytoplankton, production by; bacteria, importance to; patterns 3151
organic matter: biogenic
characterization by stepwise thermogravimetry 2981
organic matter colloids
seawater; isolation methods 2990
organic matter decomposition
Cuba, Batabano Bay; microbiota, heterotrophic, by 1661
organic matter mineralization
aerobic and anaerobic; sediment microcosms 2257
organic matter: terrestrial
coal; petroleum, potential as source rocks for; symposium papers 2189
organic metal complexes
copper, complexation behavior 2561
organism<s> (See also BIOTA, FAUNA, FLORA ...)
organisms
can they direct their evolution; evolution; mutation 573
organizations: international
European Aquatic Sciences Libraries and Information Centres, as regional section; International Association of Marine Science Libraries and Information Centers; 13 papers; French and English 581
organochlorine pesticides
Southern Ocean, Indian sector; PCBs; plankton, phyto- and zoo- 2842
chlordane; Bivalvia; population dynamics, effects on structures 2846
Thailand: Gulf of; Bivalvia; Perna, viridis, residues in ... 2847
organochlorines
Greece, waters around; fish, red mullet 549
persistent; coastal fronts, in 810
San Francisco Bay; California; trace elements; content in surf scooters, 1985 1042
dioxins, dibenzofurans; Sweden; Baltic Sea, coast; aromatic hydrocarbons; atmosphere, in 1947
dioxins, dibenzofurans; Baltic Sea, coast; aromatic hydrocarbons; atmosphere, in 1987
chlorobiphenyls and pesticides; Southern Ocean, sub-Antarctic; biota 2316
Denmark; Greenland; Cetacea; porpoises, harbor 2321
Adriatic Sea, E, long-term trends; coastal sediments; DDT; PCBs 3041
organophosphates
Florida; Indian River, Estuary; malathion, assimilation .. 232
Crustacea, estuarine, 2 spp., genetic structure; pollution, effects 1041
organotin pollution
widespread; Gastropoda, dog whelks, imposex in; tin 1710
orientation
off dark and artificially lighted beaches; Caretta, caretta; sea turtles, hatchling loggerheads 462
orientation: solar
Decapoda; Talitrus, saltator (British sandhoppers) 2822
origin of life (More at EVOLUTION ...)
ornithological research
Southern Ocean; Prince Edward Islands; seabirds; review 2719
ornithology (More at BIRDS ...)
orogenesis
processes; margin tectonics; review 362
Osaka Bay
Japan; particle aggregates, large amorphous; nature and distribution 1331
oscillations (More at WAVES ...)
ocean-atmosphere interactions; convergence, feedback . 1275
oscillations: atmospheric
intraseasonal; North Pacific; cumulus convection, tropical; ocean-atmosphere interactions 147
meridional; ocean-atmosphere interactions; uncoupled modes 1279
semi-annual; Southern Hemisphere; mechanism of the SAO 1924
circulation, GCM simulations; North Pacific Oscillation, observations; comparison 2521
oscillations: frontal
Newfoundland, NE shelf; currents 1817
Oscillatoria
limosa; Microcoleus, chthonoplastes; cyanobacteria, mat-forming; interactions; bundle formation and de novo mat genesis 2748
oscillatory flow
fluid dynamics; Lagrangian circulation 125
osmium
sediments 285
osmotic pressure (More at PRESSURE ...)
Ostracoda
Pliocene; North Atlantic; paleoceanography, shallow-water; fossil record 2085
community; Arabian Gulf, Al-Khiran; hypersaline channels 2273
China, seas; Foraminifera; paleobiogeography 2619
benthic; Antarctica; in German, English abstract 3187
myodocopid; Pacific, E; hydrothermal vents 513
OTEC (More at POWER ...)
otoliths: fish
tree rings of the deep; report 1120
Otranto Strait
Mediterranean Sea; strait flow; water masses 1805

outer continental shelf (Use OCS)
Outer Continental Shelf Environmental Assessment Program (Use OCSEAP)
outfalls (More at WASTE DISPOSAL ...)
outfalls: sewage
Australia, Sydney; organic matter, characterization; air-sea interface; water column, subsurface; sediments 1972
benthos, temporal changes; pollution gradients, along; discriminating natural phenomena effects 2318
outflows: saline
Arctic Ocean, from; Norwegian Sea; Greenland Sea; Iceland Sea; water masses, deep water formation 2419
oxidation
Chesapeake Bay; hydrogen sulfide 1983
Norway, S; Framvaren Fjord; hydrogen sulfide 2581
oxygen (See also BOD ...)
benthic fluxes; sediments; interstitial water, flow; waves, effects 202
summer depletion; New England; estuaries, diked 203
World Ocean; carbon; sulfur; interrelationship between temporal trends in isotopic curves 220
fluxes; North Atlantic; nutrients, fluxes; heat, and mass, budgets 628
fluxes; Baltic Sea, and adjacent regions; air-sea interface; organic matter, net production 781
ice-water interface; hydrogen; equilibrium isotope fractionation 1206
O-18; Pliocene, and Pleistocene; Pacific; calcium carbonate, preservation; paleoceanographic and paleoclimatic implications 1425
respiration; North Pacific, Subtropical Gyre; productivity, gross; community production; in-vitro and in-situ rates 1620
benthic, uptake; submarine caves; carbon, cycling; effect of aphotic and resource-limiting conditions 1637
supersaturation; Kuroshio, at eddy boundaries; primary production 2225
benthic consumption; Canada, E, off; shelf sediments 2245
Mediterranean Sea, E; chlorofluoromethane; water masses, interactions 2406
distribution; sediments 2567
oxygen cycle
ocean-atmosphere interactions; carbon cycle; silicate weathering, importance as control 1350
oxygen: dissolved
fluxes; Kiel Bight; Kattegat; Baltic Sea, area; effect of inflows on deep-water oxygen conditions 204
oxygen minimum layer (More at LAYERS ...)
oxygenation
Mesozoic, Late; Cenozoic, Early; nutrients, oceanic distribution; water masses, limits on warm saline bottom water formation 313
Oxytricha
bifaria; Ciliata, hypotrichous; air-water interface 3196
oysters (More at SHELLFISH ...)
field bioassay approach to monitoring; California; tin; tributyltin; toxicities 3216
ozone: atmospheric
minimum; Pacific, equatorial 1942
ozone: stratospheric
hole; algae, UV-absorbing substance, correlation with 536

Pacific (See also circum-, North- and South Pacific, and narrower geographic, physiographic and zonal designations ...)
W tropical; water masses, surface warm, subsurface cold; interannual variations; in Chinese, English abstract 5
W equatorial; surface heat, balance; in Chinese, English abstract 7
W tropical; weather, Japan summer, unusual; tropics; relationships 126
W equatorial; wind, westerly bursts; surface heat flux 138
W tropical, over; surface temperature; atmospheric convection; water vapor; relationships 139
tropical; atmospheric circulation, response; ocean-atmosphere interactions; surface temperature 143
W equatorial; rainfall, late autumn; in Chinese, English abstract 155
W equatorial; air-sea interface; carbon dioxide, exchange; in Chinese, English abstract 199
equatorial, along 135°N; particulates; organic matter; chlorophyll; surface layer 207
S central; clay minerals; sediments 278
central; clay minerals; sediments; in Chinese, English abstract 301
W; Cenozoic; Tethys; plate tectonics; paleogeodynamic maps 366
basalts, tholeiitic, alkalic; crust, oldest 381
western rim; lithosphere, 3-D configuration; subduction zones 401
central; manganese crusts; geochemical characteristics; in Chinese, English abstract 428
E; Ostrocoda, myodocopid; hydrothermal vents 513
W; Indian Ocean, N; Coccolithophoridae; epicontinental seas; Recent monsoonal and fertility controls on coccolith assemblages 540
California Current, system, and tributaries; Atlantic; oceanography; special tribute issue for Joseph Reid; 25 papers 632
intermediate and deep waters; water mass tracers, conservative; consistent inventory 670
Samoa Passage, into; abyssal flow; deep circulation 675
N and equatorial; eolian dust; sediments, pelagic; geochemistry, paleoclimate implications 828
W; basin subsidence; seafloor, flattening; long-wavelength residual topography, interpretations 881
Tonga, slab, geometry and extent; subducting lithosphere; tectonics 885
equatorial; Tonga; seismic strain, rate; crustal deformation 886
E; Pocilloporidae; corals, reef-building; reproduction ... 994
E central; waves; current shear; variability 1232
W equatorial; Nauru Atoll; phosphates, origin; in French, English abstract 1373
examples from; carbonate platforms, mid-oceanic; seamounts; islands, as oceanic dipsticks 1378
Pliocene, and Pleistocene; calcium carbonate, preservation; oxygen, O-18; paleoceanographic and paleoclimatic implications 1425
W equatorial; Pleistocene, Late; Ontong-Java Plateau; carbonate sediments 1442
Solomon Islands; Vanuatu; petroleum potential; island arcs 1564
pelagic; phytoplankton; iron, sources; report 1602
E; Decapoda; Anomura; Pagurus, lepidus complex, 3 n.spp. 1677
E equatorial; paleoceanography; paleoclimate; ODP Leg 138 report 1753
Australia; Leeuwin Current, driving forces; currents; wind, and heating, role 1800
Atlantic; equatorial currents; wind, as forcing agent; contrast in seasonal cycles 1808
W tropical; air-sea interactions; surface temperature; circulation, general; large-scale interannual and intraseasonal interactions 1912
W tropical; monsoon circulation; ocean-atmosphere interactions; generation of the Mindanao Dome 1914
equatorial; atmospheric ozone, minimum 1942
deep water; suspended matter; calcite, sources and transport 1977
W equatorial; Pleistocene, Late; bathyal thermocline; water masses, glacial deep-water properties 2094
tropical; Pliocene; Eniwetok Atoll; sea level, change 2102
W and central equatorial; Quaternary, Late; Radiolaria; biogeography and paleoecology 2103
Shatskiy Rise, N of; crust, structure 2165
central tropical; zonal currents, variations; sea level, dynamic height data 1970-1987 2415
over; sulfate aerosols; atmospheric particulates 2550
over; sulfate aerosols; geographic, temporal variations 2552
equatorial and high-latitude sites; particulates, data; thorium, isotope; generalized scavenging model 2574
central equatorial; biogenic silica, dissolution; organic matter, benthic carbon degradation 2580
W; Eniwetok Atoll; Foraminifera, planktic; calcareous nannofossils 2591
equatorial; Neogene; Eniwetok Atoll; biostratigraphy, and paleoenvironments 2607
W equatorial; Foraminifera, benthic, fossil record; productivity, paleo-; paleoceanography, glacial to postglacial change 2608

W tropical; Eniwetok Atoll; Foraminifera, biostratigraphy; sediments, borehole ... 2614
central equatorial; siliceous sediments; magnetization, stable remanent, origin ... 2624
NE equatorial; manganese nodules; origin, distribution; in In Korean, English abstract ... 2660
central; ferromanganese crusts; variability, geochemistry ... 2661
equatorial; plankton, nutrition; iron; nitrogen ... 2690
E, tropical perturbations; air-sea interactions; precipitation, field over NW Mexico; El Niño; relationships ... 2959
tropical, vertical motion over; atmospheric circulation ... 2962
Indian Ocean; silica, -132 profiles ... 2974
tropical; surface salinity; seasonal, interannual variations ... 2976
radium, -226 flux; barium, flux; importance of boundary processes ... 3034
North Fiji Basin, Ridge; hydrothermal vents; geology, geochemistry ... 3057
central equatorial; crust, oceanic, through; seawater, large-scale advection ... 3058
W; marginal seas; sediments, elements characterized; in Chinese, English abstract ... 3077
Rurutu Island, and Sasha seamount; basalts, Pb isotope composition explained by sample contamination ... 3104
North Fiji Basin; tectonics; magmagenesis ... 3108
Rim; seismic gaps, hypothesis, ten years later; earthquakes, regularity, severity ... 3118
Solomon Islands; fault zones, strike-slip; seabed minerals, potential, effects on ... 3131
Miocene, -Pliocene; Solomon Islands, Iron Bottom Basin; sediments; hydrocarbons, potential reef traps ... 3135
Atlantic; Baltic Sea, and the Gulf of Bothnia; Barents Sea; ferromanganese nodules; Ce, Nd, Sr isotopic compositions compared ... 3138
central; ferromanganese crusts, REE variability; rare earths, paleoceanographic implications ... 3140
central equatorial; ferromanganese crusts, Co-rich; regional and depth variability in composition ... 3141
North Fiji Basin; hydrothermal deposits; ferromanganese oxides ... 3142
W; bacteria; fjords, in; eutrophication, influence ... 3176

Pacific Plate
paleomagnetic field, pole, 65 Ma; derived from skewness data of magnetic anomalies ... 853

pack ice (More at ICE ...)
Weddell Sea, winter aggregations in; mammals, marine; seabirds ... 2198

Paguroidea
Anomura; Parapagurus, genus revision, W Atlantic spp. redescriptions ... 515

Pagurus
lepidus complex, 3 n.spp.; Pacific, E; Decapoda; Anomura 1677

Pakistan
Hazara Arc, beneath; Indian Plate, geometry; earthquakes, hypocenters, velocity structures ... 2651

Palaemonetes
pugio, by; Decapoda; Callinectes, sapidus postlarvae, predation on; Crangon, septemspinosa, by ... 2288

paleoceanography
California; Santa Barbara Basin; sediments, laminated, reflected in carbon isotopic ratios ... 829
paleochemistry; Quaternary; U.S. report to IUGG ... 834
oceanic variability; Pleistocene, Late; North Pacific, W; continental climate; sediments, recorded in ... 838
Japan; Sea of, past 85 kyr ... 1437
Pacific, E equatorial; paleoclimate; ODP Leg 138 report ... 1753
shallow-water; Pliocene; North Atlantic; Ostracoda; fossil record ... 2085
Eocene; Oligocene; Southern Ocean, Atlantic sector; ODP sites 689B and 690B ... 2087
Brachiopoda; shells, calcite, influences on composition; fossil record ... 2605
glacial to postglacial change; Pacific, W equatorial; Foraminifera, benthic, fossil record; productivity, paleo- ... 2608
record; Quaternary, Late; North Pacific, W; Ryukyu Trench, slope; sediments ... 2611

Paleocene
end; deep-sea warming, abrupt; mass extinction, benthic; paleocirculation, changes ... 1433
Late; North Atlantic, W; Baltimore Trough; sediments, stratigraphy; paleoceanography; in French, English abstract 1454

paleocirculation
changes; Paleocene, end; deep-sea warming, abrupt; mass extinction, benthic ... 1433
shifts; simultaneous drops in O and C isotope ratios and Foraminifera ... 1750

paleoclimate (More at CLIMATE ...)
reconstruction; carbonate sediments, equatorial; extraction of high-resolution carbonate data ... 318
surface temperature, tropical; carbon dioxide, changes; relationships ... 738
Cenozoic, Late; climate change; carbon dioxide, dynamics; ice, global mass; temperature; first-order global model ... 741
Quaternary; climate, records; strategy for frequency spectra . 833
mantle plumes, superplumes; volcanism; relationship hypotheses; report ... 1115
Pleistocene, modelled ... 1431
and climate change; coral reefs; as recorders of environmental changes ... 1745
Greenland Ice Sheet; ice cores; climate change, implications for; report ... 1752
Pacific, E equatorial; paleoceanography; ODP Leg 138 report ... 1753
significance; glaciomarine sedimentation; symposium papers ... 2079
26 to 5 kyBP; Mediterranean Sea, E; Bannock Basin; sediments, pollen and isotopic analysis ... 2081
Pliocene; climate; AGU meeting, papers ... 2086
reconstruction; Pliocene; fossil record, dinoflagellate cysts; methods comparison ... 2091
Holocene; Tibet, W; climate, 13-kyr record ... 2093
evolution; Pliocene; Southern Ocean; sea level, ice cover, and circulation ... 2095
evolution; Pliocene; Pleistocene; North Pacific; fossil record ... 2099
fossil record, mammal size gradients; evolution, of size; calibrating the paleothermometer ... 2106
Holocene; palynology; pollen analysis; principles, population and community ecology, paleoclimatology; review .. 2107
Antarctica; Vostok; atmospheric carbon dioxide; ice cores ... 2508
implications for; global energy balance; influence of various forcing variables ... 2950
Cretaceous, Maastrichtian; phytogeography; reconstructions ... 3072
and models; fossil record ... 3258

paleoecology
Eocene, Late; Oligocene; Canada, E; Newfoundland, NE shelf; Foraminifera, assemblages ... 2111
fossil record; ecology, contemporary, implications for ... 2341

paleoenvironments
Quaternary; China, mainland; sediments; climate, and climate change; collection ... 3069

Paleogene
stratigraphy; Mexico: Gulf of, NW; sedimentation, rates . 1426

paleogeography
Neogene; Mediterranean Sea, W; tectonics; problems of palinspastic reconstruction; 12 papers ... 312
global temperature, surface; atmospheric carbon dioxide; coupled model with latitudinal contrast ... 2612

paleomagnetic<s> (More at MAGNETICS ...)

paleomagnetic field
data; bootstrap statistics ... 342
pole, 65 Ma; Pacific Plate; derived from skewness data of magnetic anomalies ... 853

paleomagnetism
California, coastal; Baja California; tectonics, transport, alternatives to ... 352
reference poles, APW paths, Euler pole analysis, true polar wander; U.S. report to IUGG ... 854
geomagnetic field; overview 1987-1990 studies; U.S. report to IUGG ... 855
tectonics, microplate; U.S. report to IUGG ... 862
in the Kani group in SW Japan; Miocene, Early; Japan: Sea of, opening, implications for; tectonics ... 1457
and fission track geochronology; Japan: Sea of, implications for the opening mode; Tsushima Strait, area; tectonics 1460
oscillations, chronological potential; Quaternary, Late; Lake Tanganyika; Africa, East; sediments ... 2119
Thurston Island; Antarctica, West; Weddell Sea, opening; magnetic field; tectonics ... 2134
Paleozoic, Late; South America; tectonics, rotations; plate motions ... 2139

paleontology: isotope
calcareous biota; growth and composition of extant species .. 2113

paleontology: molecular
fossil record, biomolecules; biochemical systematics 2386
paleotemperature (More at TEMPERATURE ...)
SST; sediments, alkenone unsaturation ratio method 321
Paleozoic
Late; South America; tectonics, rotations; plate motions; paleomagnetism 2139
palynology
Quaternary, Late; Indonesia, E; sediment cores 1441
Holocene; paleoclimate; pollen analysis; principles, population and community ecology, paleoclimatology; review 2107
Panama
coast; Caribbean area; oil spills, major; corals, reef-, subtidal; short-term ecological consequences 1035
Pandalidae
Plesionika, crosnieri n.sp., and P. edwardsii; similarities 2275
Papua New Guinea
Fly Delta; intertidal mudbanks, role; nutrients, particulate and dissolved, diagenesis and export 208
Fly Delta and Gulf of Papua; sediments; copper, vertical profiles 227
Arafura Sea; petroleum seeps; sediments, onshore and offshore; detection methods 1567
Solomon Sea; collision tectonics; collision propagation ... 2130
para-aminobenzoics (Use PAB's)
Paracilicaea
2 n.spp.; Asia, SE, coast; Isopoda, sphaeromatid 1007
Paradyopedos
n.gen.; Antarctica; Amphipoda, gammarid; in German, English abstract 3183
paralic environments
Foraminifera, benthic, as indicators of gradient of marine influence 523
parallel evolution
Foraminifera, planktonic, keel structure 2299
Paramushir Island
off; Okhotsk: Sea of; metals, anomalous behavior; gas vents 2186
Paranebalia
belizensis n.sp.; Belize; Caribbean Sea; Malacostraca ... 2287
Parapagurus
genus revision, W Atlantic spp. redescriptions; Anomura; Paguroidea 515
parasite fauna
Antarctica; Cetacea, on; use as potential stock indicators ... 1625
parks (More at SANCTUARIES ...)
parks: marine
Philippines, Tubbataha Reef National Marine Park; status, management issues, plan 2877
particle aggregates
large amorphous; Japan; Osaka Bay; nature and distribution 1331
particle flocs
fractal aggregates, in geophysics 1760
particle flux
vertical; macrozooplankton, influence of 944
sediment traps, do they provide an accurate record? 1336
Antarctica; Bransfield Strait; organic matter, production; seasonal coupling 1337
studies; Indian Ocean 2575
particle ingestion
measurement; Protista, in; comment, cautions 916
particle sedimentation
short-term variability; Weddell Sea, off Kapp Norvegica; plankton, biomass, feeding activity; sea ice, cover; water masses, advection; relationships 788
particle size
Skagerrak, hydrography; plankton; chlorophyll, -a concentration; relationships 1979
particle size analysis
light scattering, techniques; applications, review 166
particle transport
atmospheric, riverine; Mediterranean Sea, Gulf of Lions; metals, Pb and Zn as indicators 1339
particles
dynamics; shear layers, viscously decaying; mixing 110
scavenging; clouds, models; aerosols, marine 161
settling velocity measured beyond Stokes range; wake capture effects observed in methods comparison 289
settling velocity measured beyond Stokes range; sediments, concentration and tube-diameter effects; experiment, theory 290
chemistry, source; North Sea; English Channel; atmospheric aerosols 773
ultrafine; North Sea; clay minerals; STM and AFM investigations 825
size, concentration; suspended matter; reflectance, measurements, effects on 1335
particles: cosmic
radiation, Cherenkov; deep-water module for recording 1900
particulate matter (See also detritus, marine snow, microparticulates, nepheloid layer, suspended matter; more at SEDIMENTS ...)
particulates
Pacific, equatorial, along 135°N; organic matter; chlorophyll; surface layer 207
settling; East Pacific Rise, 13°N; hydrothermal vents, fields; sediment trap measurements 213
Long Island Sound; sediments; chlorophyll, early diagenesis 276
resuspension; Bivalvia; Mytilus, edulis, effects on growth ... 502
uptake with; Australia, W; Shark Bay; Bivalvia, in; cadmium, origin of high loads 557
aquatic; organic coatings, study methodology 782
Southern Ocean; Drake Passage; organic matter; carbon isotopic variations 789
production; clouds 1299
settling; sediments; organic matter, tracers; omega-oxoacids, implications for transport of photooxidation products to deep-sea environments 1327
organic debris; margin sediments, contributions to 1328
Namibian Upwelling, variability in; organic matter, POC; nitrogen, PON 1334
Bengal: Bay of, W, distribution in; trace metals 1341
as vehicle; chemical transport, and isotopic; vertical change index 1349
and dissolved species; sediments; geochemistry, marine; symposium papers 1357
South Atlantic, over; atmospheric aerosols; lipids, terrestrial 1946
by; marine snow; fecal pellets, zooplankton; metals, scavenging and retention 1978
concentration, evaluation; Secchi disk, visibility depth; radiation, upward, spectra 1980
deep-sea plume; bacterial communities, changing; trace metals, scavenging, effects on 2256
sinking; North Atlantic; seasonal and depth-related changes in source 2573
data; Pacific, equatorial and high-latitude sites; thorium, isotope; generalized scavenging model 2574
marine snow; fecal pellets; collection, analysis 2984
radioactivity, and inorganic properties; workshop report 2985
bacteria; viruses; organic matter, dissolved; filtration, ultra- 2986
mineralogy, and surface properties; workshop report 2988
filtration, bias in 2989
mineralogy and chemistry; spectroscopy, synchrotron x-ray, Mossbauer; spectrometry, plasma-mass 2991
in-situ exploration; seawater 2992
analysis; sediments, cores and traps 2993
individual particle analysis 2994
carbon; nitrogen; sulfur; determinations 2995
surface reactivity; sampling, characterization 2996
characterization; spectrometry, ICP-MS; trace analysis ... 2998
sampling; spectrometry, x-ray fluorescence 2999
sampling, and preservation; workshop 3000
sampling, preparation, analysis 3001
chemical analysis 3002
digestion; radionuclides, blanks 3003
chemical analysis, Si, C, N, P 3004
organic matter; lignin, cutin, amino acid, carbohydrate analyses 3005
surface charge and size spectra 3007
analysis and characterization 3008
the selected particle analysis system 3009
carbon; nitrogen; phosphorus; analysis procedures 3010
elements, C, N, O, H, P, S; workshop report 3011
rapidly sinking; carbon; nitrogen; analytical determinations . 3012
colloids; metals, transition, analysis 3013
chemical analysis; sample preparation, and speciation ... 3014
organic matter, characterization; workshop report 3015
sulfur, determinations 3016
lipids; polysaccharides; amino acids; extraction, analysis . 3017

seawater; colloids; metals, associated; filtration, technique 3018
sampling, analysis; hydrothermal plumes 3019
suspended, sinking, and sedimented; chlorophyll; carotenoids; analysis 3020
and total mass; carbon; nitrogen; phosphorus 3021
collection for trace analysis; suspended matter; pumps, in-situ 3022
analysis, characterization; estuaries, in 3024
proteins; seawater, electrophoretic separation in 3025
collection; trace analysis 3026
North Atlantic, N; suspended matter, and sinking; sampling and analysis 3027
x-ray powder diffraction 3028
lipids, sampling and analysis 3029
chemical analysis; review of C:N:P methods 3030
sampling and analysis; PEBENOCO studies 3031
sampling and analysis; suspended matter 3032
chemical analysis, and collection 3033
India; Bombay; heavy metals, distribution; pollution; seawater 3037

particulates: atmospheric
Antarctica, over; polar stratospheric clouds; aerosol types, temperature, ozone layer implications 1300
cloud condensation nuclei, and Aitken nuclei, measurements; climate, -cloud-DMS hypothesis, relation to 1927
global and regional scales 1945
Pacific, over; sulfate aerosols 2550
North Sea; hydrocarbons, fraction; distribution, origin 2553

particulates: biogenic
North Pacific, E; microbiota, associated; biogeochemical cycling, productivity implications 2578

particulates: colloidal
small; seawater; occurrence 1342

particulates: cosmic
planetary debris; does it impact Earth? 2891

Pasiphaeidae
including 1 n.sp.; North Atlantic; Caribbean Sea; Decapoda, shrimps 3188

passive margins
Labrador Sea; magnetic field, anomalies, contrast 1456
detachment models for formation 2136

patchiness
British Columbia; Georgia; Strait of; microplankton communities; mosaicism 1592

patchiness: thermal
California, central, off; surface temperature; patchiness during a wind relaxation event 747

PCBs
Phalacrocorax, carbo sinensis; seabirds, cormorants; bioindicators 2333
Wales; sediments; industrial effluents 2586
Southern Ocean, Indian sector; organochlorine pesticides; plankton, phyto- and zoo- 2842
contamination, relation with; Italy; Venice Lagoon; sediments, and resuspended sediments; carbon, organic; nitrogen, organic 3038
Adriatic Sea, E, long-term trends; coastal sediments; organochlorines; DDT 3041
North Atlantic; North Sea; seawater; in German, English abstract 3043

Pearl River
Delta; China; sea level; estuarine circulation, responses; meteorological forcing and river inflow 1371

Peary Land
Greenland, N; marine mammals 2698

peat (More at SEDIMENTS ...)

Pecten
maximus, and others; Mollusca, 5 spp.; growth, postlarval; reproduction, patterns 477

peer review
science publishing; due for an overhaul 601
criticized; science; publishing 1739

pelagic communities
test of the distributed state, kinetic modes of heuristic models 1584

pelagic ecosystems
Black Sea; zonation, vertical 1619

pelagic food webs
Dinoflagellata, heterotrophic, quantitative importance and trophic role 933
structure; coastal zone; benthos, interactions with 2668

pelagic sediments (More at SEDIMENTS ...)
Caribbean area; tectonics, history 310

pelagic zone
Baltic Sea; bacterial communities, development 1657

Penaeus
semisulcatus, growth, movement, age structure and parasite infestation (*Epipenaeon ingens*); Australia; Carpentaria: Gulf of, NW; Natantia 2291

penguins
Adelie, depth utilization by; Antarctica, Esperanza Bay; seabirds, breeding 487
effects on energy metabolism and physiology; Antarctica; oil pollution 1700
Adelie, effects on; Antarctica; Pygoscelis, adeliae; humans; aircraft 2870

pentachlorophenols (Use PCP's)

peridotites (More at IGNEOUS- ...)
Zabargad; Red Sea Rift; rifting; evidence for multistage metasomatism 405

periphyton (More at FLORA ...)

periphyton communities
arsenic, arsenate stress; pattern of cotolerance 3199

permafrost (More at ICE ...)

Permian-Triassic boundary
Siberian Traps; flood basalts; volcanism, rapid eruption 388

Perna
viridis, residues in; Thailand: Gulf of; Bivalvia; organochlorine pesticides 2847

Persian Gulf
Oman, coastal waters; seawater; sediments; biota, oysters; hydrocarbons, content 1083
Stomatopoda; Manningia, new 3190

Peru
Quaternary, Late; coastal upwelling; productivity, changes revealed by diatoms 331

Peru Undercurrent
variability; currents 655

Peru-Chile Trench
studies in; lithospheric plates; curvature and elastic thickness relationships 1489

Peruvian Upwelling
Swartkops Estuary; Ems Estuary; Chesapeake Bay; Baltic Sea; Benguela Upwelling; ecosystems marine; ecology, comparative 918
significance; South Pacific; thermocline ventilation 2425

pesticides
Greece, Thermaikos Gulf; Mediterranean Sea; runoff; pollution 226
carbaryl, 1-naphthol, atrazine; seawater, fate in 798
carbaryl, naphthol, chlorpyrifos, effects of; Pocillopora, damicornis, planulae; corals, larval 1027
3; Decapoda; Scylla, serrata, effects on behavior; toxicities, acute 1707

pesticides: organochlorine
Southern Ocean, Indian sector; PCBs; plankton, phyto- and zoo- 2842
chlordane; Bivalvia; population dynamics, effects on structures 2846
Thailand: Gulf of; Bivalvia; Perna, viridis, residues in 2847

Petersen grab (More at GRABS ...)

petrochemical plants
around; North Sea; fish recruitment 1039

petrogenesis: arc
Philippines; Luzon Arc, S; geochemisty, petrology 378

Petroleos Mexicanos (Use PEMEX)

petroleum (See also GAS, OIL, tar; more at HYDROCARBONS ...)
reservoirs, potential; Mesozoic; Mediterranean Sea; basin sediments 425
sediments; steranes, 3-beta-ethyl, identification and significance 796
products, effects; Pocillopora, damicornis, planulae; corals, larval 1045
reservoirs, production, projections; North Sea 1568
potential as source rocks for; coal; terrestrial organic matter; symposium papers 2189
generation, migration; sedimentary basins, hydrocarbon-bearing; organic geochemistry; symposium papers 3132

petroleum biodegradation
Caribbean Sea, W; bacteria, oil-degrading; currents, and oil inputs 2324
North Sea; Baltic Sea; bacteria, hydrocarbon-degrading; distribution, activity 2722

and emulsification; bacteria, oil-degrading 2740
bacteria; biogenic surfactants; microbiota, from 2769
potential; Japan, NE waters; bacteria, oil-degrading, distribution 3220
petroleum exploration
Caribbean area; hydrocarbons, geologic rationale 910
Global Positioning System, potential uses 1566
petroleum geology
Fiji; basin sediments 3134
petroleum: offshore
U.K., activities; oil; gas 1563
industry; Australia; environmental protection 1732
petroleum pollution
Mexico, Tabasco shelf; sediments 1351
petroleum potential
offshore; Arctic Ocean, area; hydrocarbons, reserves 908
Caribbean Sea, NE Caribbean Plate boundary zone; sedimentary basins 909
Caribbean Sea; hydrocarbons, reserves; 7 papers 911
Pacific; Solomon Islands; Vanuatu; island arcs 1564
Canada, Scotian shelf; sediments, shales; petrophysical characteristics 2187
future supply; U.S.; oil; gas, natural 2874
petroleum production (More at POWER ...)
activities; macrobenthic communities, effects on; production water discharges 2329
petroleum seeps
Papua New Guinea; Arafura Sea; sediments, onshore and offshore; detection methods 1567
petroleum source rocks
geological record, world-wide, stratigraphic intervals 2657
Petrolisthes
spp., distribution; Anomura; intertidal zonation 512
pH (See also alkalinity ...)
influence; yellow substance, determination in estuarine areas; heavy metals, influence 1212
effect of; phosphorus, release from sediments; phytoplankton blooms, blue-green algae 2228
Phaeocystis
blooms, importance; Prymnesiophyta; carbon cycle; polar seas 950
sp., ability to grow; phosphates, organic; microalgae 1617
Phaeodactylum
tricornutum, effects on growth; phytoplankton; mercury; in Chinese, English abstract 553
tricornutum, Hg absorption; mercury; phytoplankton; interactions; in Chinese, English abstract 554
tricornutum; mercury; toxicities; in Chinese, English abstract 555
tricornutum; copper; toxicities; in Chinese, English abstract . 567
Phalacrocorax
atriceps; Southern Ocean; diving, patterns and performance; seabirds, blue-eyed shag 2255
carbo sinensis; seabirds, cormorants; bioindicators; PCBs . 2333
Phanerozoic
fossil record; extinction, a kill curve for marine species 849
pharmacognosy (More at DRUGS ...)
phenols
halogenated, degradation; anoxic sediments 225
phenolic compounds; Mediterranean Sea, deltaic and lagunal environments; seawater; sediments 1966
pheopigments (More at PIGMENTS ...)
pheromones (More at CHEMOTAXIS ...)
Philippine Sea
deep structure; hydrographic surveys 38
Philippine Sea Plate
plate motions; tectonics; VLBI measurements 1491
bending accelerated; Izu Peninsula; crustal deformation, contemporary 3085
Philippines
Luzon Arc, S; arc petrogenesis; geochemisty, petrology ... 378
Luzon; lavas, geochemistry; magma, multiple supply systems; mantle, heterogeneity 387
Tubbataha Reef National Marine Park; marine parks; status, management issues, plan 2877
philosophy of science (More at SCIENCE, ACADEMICS ...)
Phoca
vitulina; Norway, status in; Pinnipedia, harbor seals 1624
Phocoena
phocoena; North Sea; Kattegat; Cetacea, spp.; mercury, contamination 2322
phosphates
exchange; South Africa, Swartkops Estuary; Algoa Bay ... 787
dissolved, effects on exchanges; Polychaeta; Nereis, diversicolor; sediment-water interface 791
origin; Pacific, W equatorial; Nauru Atoll; in French, English abstract 1373
organic; Phaeocystis, sp., ability to grow; microalgae 1617
interstitial and adsorbed; India, E coast; shelf sediments ... 2598
phosphoenolpyruvate carboxylase (Use PEPCase)
phosphorites (More at SEDIMENTS ...)
phosphorus
scavenging of; seawater; arsenic, scavenging of; iron, oxyhydroxides, hydrothermal, by; inter-ocean variations .. 188
total; Taiwan Strait, central and northern; sediments, distribution characteristics in; carbon, organic; nitrogen, total; in Chinese, English abstract 288
carbon; nitrogen; biogeochemistry; U.S. report to IUGG ... 795
Mediterranean Sea, E; productivity, primary, limitation .. 937
distribution, in waters of different trophicity; suspended matter, size fractions 1981
release from sediments; pH, effect of; phytoplankton blooms, blue-green algae 2228
particle-bound; Delaware Estuary; suspended sediments 2577
particulates; carbon; nitrogen; analysis procedures 3010
particulates, and total mass; carbon; nitrogen 3021
phosphorus metabolism
Copepoda, life cycle stages; zooplankton 2279
photic zone (More at ZONES ...)
photochemical degradation
organic matter, DOC; carbon cycle, oceanic, impact on ... 1348
photochemistry
stratosphere; radiation, processes; interactions 159
tropospheric chemistry 1294
iron colloids, oxyhydroxides; seawater, in 2563
photolysis
colloidal iron; effects on chemical lability 1316
photomicroscopy (More at MICROSCOPY ...)
photosynthesis
light response; California, N, off, June 1987; phytoplankton 935
photoadaptation; Barents Sea; ice microalgae 1023
aqueous; carbon dioxide, control on C isotope fractionation; a paleo-pCO_2 barometer 1430
response; phytoplankton; mixed layer, upper, in; Eulerian model 1597
seasonal patterns; seaweeds, littoral; emersion, effects; physiology 2305
Antarctica; macroalgae, endemic; respiration, dark; carbon fixation, light-independent 2306
-irradiance relationships; Weddell Sea; epontic algae; carbon, metabolism 2680
inhibition; Thalassiosira, pseudonana; diatoms; radiation, UV, function of dose and dosage rate 2832
coral reefs; calcification; alkalinity, anomaly technique .. 3166
phototaxis
and gravitaxis; Dinoflagellata; Prorocentrum, micans; migration, vertical 538
phycocolloids
commercial; Gelidium; seaweeds; workshop 2307
physiology: diving
women, scuba divers; potential risks 587
Physosomata
North Pacific, W; Amphipoda, hyperiid; Scina, 4 n.spp. .. 2297
phytobenthos (More at BENTHOS ...)
phytogeography
Cretaceous, Maastrichtian; paleoclimate; reconstructions .. 3072
phytoplankton (More at PLANKTON ...)
China; Jiaozhou Bay; seawater; mercury, concentrations, distributions; in Chinese, English abstract 231
kelp-bed populations; South Africa; upwelling, areas 438
ways of life; morphology, physiology, ecological strategies 439
light absorption spectra; pigments, composition, effects 444
nutrients; eddy diffusion; estimating coefficients 451
primary production; measurement by the acidification and bubbling method 454
chlorophyll, determinations 455
mussel beds, as stimulus 478
cultured; barium, accumulation 548
Phaeodactylum, tricornutum, effects on growth; mercury; in Chinese, English abstract 553
Phaeodactylum, tricornutum, Hg absorption; mercury; interactions; in Chinese, English abstract 554

metals, Cu, Zn, Pb, Cd; toxicities; in Chinese, English abstract 560
China, Jiaozhou Bay; seawater; sediments; tin, speciation; in Chinese, English abstract ... 596
DNA, and RNA, measurement; new double-staining technique 915
biomass, species composition; California, N, coastal transition zone; nutrients, distribution, effects; current transport; primary production ... 925
chemical composition; zooplankton, production, implications for ... 930
identification, enumeration; proposal for standardization of presentation of results ... 932
California, N, off, June 1987; photosynthesis, light response 935
productivity, controls on; environment, physical structure, optics ... 947
community succession; convergence in microcosms using different inoculum species composition ... 951
North Atlantic, surface waters; carbon, budget, role in ... 952
responses; North Pacific; primary production; atmospheric iron, deposition ... 955
Calanoida; Cyclopoida; zooplankton; short-term experiments on interactions ... 1013
transport; California, N, off; coastal upwelling; water masses, subduction ... 1114
possible effects on; South Africa; Benguela Upwelling, area; chlorophyll, *-a* distribution; global warming; fish, pelagic, implications for ... 1586
Antarctic Peninsula; Bransfield Strait, region; primary production ... 1595
photosynthesis, response; mixed layer, upper, in; Eulerian model ... 1597
nitrogen, assimilation, implication for cycling; in Japanese, English abstract ... 1598
Pacific, pelagic; iron, sources; report ... 1602
observations, modelling; Antarctic Peninsula; Bransfield Strait; mixing, depth, relationship to ... 1603
how many species; World Ocean ... 1615
vertical distribution; Adriatic Sea, N; analytical model calculations ... 2220
biomass; Weddell Sea, and vicinity; zooplankton, proto-, biomass ... 2221
released, aggregations of; sea ice, melting; microalgae ... 2224
North Carolina; Neuse River, Estuary; nutrients, limitation; seasonal and hydrological control ... 2226
size, odors, motility; Copepoda, remote detection by ... 2277
consumption of; Copepoda, herbivorous, diurnal rhythms, rations and consumption ... 2278
Benguela Upwelling; nitrogen; upwelling, state variables, short-term variability ... 2665
uptake by; iron; nitrates; rebuttal ... 2669
distributions; Arabian Gulf; Oman: Gulf of; environmental conditions September 1986 ... 2678
assemblages; Spain, 3 Galician estuaries; chlorophyll maximum layer; hydrography relationships ... 2679
populations, variability; Korea, Masan Bay ... 2687
distribution, composition; Korea, southern seas; water masses, relation to; in In Korean, English abstract ... 2688
dynamics; Benguela Upwelling; short-term variability ... 2689
coastal zone, brackish waters; bacteria; relationship, incidence of vibrios ... 2725
concentration; Mexico: Gulf of; surface temperature; seasonal variations, satellite observations ... 2885
Adriatic Sea, N; nutrients, supply, controlling mechanism ... 2983
production by; organic matter, dissolved; bacteria, importance to; patterns ... 3151
nitrates, kinetics, and shift-up; upwelling zones ... 3154
Europe, NW, Armorican Shelf; nutrients; spring evolution; in French, English abstract ... 3157
abundance; North Atlantic; mixed layer, dynamics; nutrients, cycle; meridional variability of the seasonal cycle; in German, English abstract ... 3163
California, N, off; current jets; biomass transport; cool filament chemical and biological structure ... 3255

phytoplankton biomass
South Africa, 3 eastern Cape estuaries; primary production 1587
and composition; Weddell-Scotia Confluence, area; Southern Ocean ... 2215
Benguela Upwellings; productivity, and species changes ... 2685
methods comparison ... 3152
primary production; characterization of brackish waters of different trophic levels ... 3162

phytoplankton blooms
Alaska; Auke Bay; interannual variability ... 457
during; organic matter, DOC, high turnover rates ... 936
spring; Antarctic Peninsula; Bransfield Strait, region; DNA, dissolved and particulate, dynamics ... 1585
Scandinavia, coastal waters; Chrysochromulina, polylepis, unusual bloom in 1988; environmental conditions and ecophysiological mechanisms behind bloom ... 1601
spring; Antarctic Peninsula; Bransfield Strait, region; glutamate, assimilation patterns; thymidine, assimilation patterns ... 1652
blue-green algae; phosphorus, release from sediments; pH, effect of ... 2228
Arabian Sea, NW; monsoon, SW, 1979 ... 2671
Gulf Stream, filaments, carried on; Dinoflagellata; Gymnodinium, breve; red tides, expatriate ... 2834
Adriatic Sea, July 1984 ... 3161

phytoplankton communities
Greece, Thermaikos Gulf; composition and biomass ... 449
dynamics; North Pacific, Central Gyre; ocean-atmosphere interactions, impacts ... 2210
Arctic Ocean; Fram Strait; distribution in relation to hydrography ... 2682

phytoplankton growth
Dinophyceae; Prorocentrum, minimum; nitrates, uptake ... 543
chromium, effects ... 566
limited; North Pacific, subarctic; iron, deficiency, by ... 2218
colimitation; nickel; nitrogen ... 3159

phytoplankton pigments (More at PIGMENTS ...)
patterns; California, central, off; wind, forcing by ... 921

phytoplankton production
and size fractionation; Black Sea, winter, spring ... 447

picophytoplankton
North Pacific, W, summer '89, distributions; cyanobacteria 450
seasonal dynamics; Baltic Sea; flagellates, grazing by ... 938

picoplankton
food chains, dynamics; upwelling zones; reaction-diffusion model ... 2683
estimation; microscopy, epifluorescence ... 2684

picoplankton blooms
May-June 1988; Skagerrak; Kattegat; Chrysochromulina, polylepis; environmental conditions, possible causes, effects; ICES workshop report ... 949

picoplankton communities
analysis by gene cloning and sequencing ... 500

piercement domes (More at DOMES ...)

pigments (See also pheopigments ...)
composition, effects; phytoplankton, light absorption spectra 444
distribution; Mediterranean Sea, W; primary production 2686
color; Stomatopoda, mantis shrimp; vision, polychromatic; compound eyes, structure ... 2816

pigments: algal
carotenoids; chlorophyll; chemical analysis ... 2978

pigments: chlorophyll
and degradation products; spectrofluorometric determinations ... 448
organic matter; sediments, preservation in ... 2053
carbon, cell; nitrogen, cell; nannoflagellates, growth rate ... 2676

pigments: phytoplankton
patterns; California, central, off; wind, forcing by ... 921

pillow basalts (More at BASALTS ...)

pillow lavas (More at LAVA ...)

Pine Cay
British West Indies; Isopoda, 4 n.spp. ... 1680
British West Indies; Isopoda; Armadilloniscus, steptus n.sp. ... 1685

pingers (More at OCEANOGRAPHIC APPARATUS ...)

Pinnipedia
Halichoerus, grypus; foraging, behavior; diving; seals, movements ... 461
reproduction, cycles; environmental and physiological factors controlling reproduction ... 957
harbor seals; Norway, status in; Phoca, vitulina ... 1624
Baltic seals; Finland: Gulf of; present status, future predictions ... 1626

pipeline<s> (More at STRUCTURES ...)

piston coring (More at coring ...)

planetary boundary layer (More at BOUNDARY LAYERS ...)

planetary debris
cosmic particulates; does it impact Earth? ... 2891

planetary magnetism
geomagnetic field, transient; the *K*-derived planetary indices ... 1464

planetary research
spaceborne radar; microwave remote sensing, and telemetry; Magellan (Venus) and various earth observing systems; 8 papers ... 1057

planetology (More at GEOLOGY ...)
plankton (See also ichthyo-, macro-, mero-, micro-, microphyto-, microzoo-, nanno-, phyto-, ultra-, and zooplankton; algal blooms, hyponeuston, neuston, primary production, red tides ...)
Australia; Bass Strait, cascade; shelf-break fronts; nutrients ... 440
nanno-, pico-; Greenland Sea, for instance; polar seas, importance in; in German, English abstract ... 441
German Bight; Kiel Bay; nutrients, N, P; hypoxic water, conditions ... 577
biomass, feeding activity; Weddell Sea, off Kapp Norvegica; particle sedimentation, short-term variability; sea ice, cover; water masses, advection; relationships ... 788
decimeter scale heterogeneity; Dinoflagellata; Gyrodinium, aureolum; pycnocline, blooms in ... 922
Baltic Sea, Patchiness Experiment; chlorophyll, -a concentrations; productivity; measurements intercomparison .. 939
Antarctic Peninsula; ecosystems; krill; Project RACER overview ... 1576
vertical migration; Dinoflagellata; Gonyaulax, catenata; Mesodinium, rubrum ... 1609
uptake, intracellular storage (nitrate); Skagerrak; carbon; nitrogen ... 1610
Skagerrak, hydrography; particle size; chlorophyll, -a concentration; relationships ... 1979
Greenland Sea; nitrogen, uptake; frontal zones ... 2216
carbon, -13 composition; history of studies ... 2227
dynamics; strange attractors; chaos theory ... 2340
communities; Protozoa, grazing by; cyanobacteria, chroococcoid; bacteria, heterotrophic ... 2673
nutrition; Pacific, equatorial; iron; nitrogen ... 2690
competitors in; Cnidaria; Ctenophora; predation; review . 2791
phyto- and zoo-; Southern Ocean, Indian sector; organochlorine pesticides; PCBs ... 2842
population dynamics, equations, interpretation ... 2849
all sizes, standing stock and metabolism; Red Sea; Aden: Gulf of; in German, English abstract ... 3160
beach-stranded; seabirds, gulls, foraging; New Zealand, Otago Harbor ... 3174
plankton blooms
Maine: Gulf of; Coccolithophoridae; biological and optical properties of the bloom ... 1692
spring; Newfoundland; bacteria, responses; temperature; substrates, concentration ... 2261
plankton communities
respiration; chlorophyll, concentration; relationship ... 1596
plankton growth
and herbivory; Southern Ocean; Dinoflagellata; possible effects on phytoplankton biomass ... 1022
pico-, nanno-; Protozoa, density-dependent effects on assemblages ... 1590
plankton nets (More at NETS ...)
plankton pumping systems
towed nets ... 1612
plankton succession
aquaculture, marine basins for larval fish rearing; fish ... 1607
planktonic communities
structure; Black Sea, epipelagic zone; Ctenophora, new species, invasion by ... 2229
planktonic food webs
carbon; nitrogen; size-based dynamics ... 1604
Benguela Current, ecosystems; size-based dynamics ... 1605
plant chemical defenses
herbivores; marine-terrestrial contrasts in ecology ... 2201
plant communities
coastal; freshwater-seawater boundary, near; water relations ... 2830
plants (See also FLORA ...)
aerial fertilization effect; atmospheric carbon dioxide; greenhouse effect, implications for; climate warming . 133
vascular; macroalgae; detritus, available and refractory nitrogen in ... 480
plants: marine
herbivores, marine; coevolution, myths; mutualism, precarious ... 1581
plastic litter
marine; artificial substrates ... 551
plastic pollution
garbagen remote oceans; letter ... 589
plate boundaries (More at LITHOSPHERE ...)
Indian Ocean, E; magnetic field, data, anomalies ... 372
Iceland; earthquakes; tectonics, present; hotspots ... 1519
ridge/transform fault, at; earthquakes; distribution of the non-double couple parameter of Harvard CMT solutions .. 1532
forces; lithospheric stress, from sublithospheric loading; tectonics ... 2150
thermomechanical state; Ryukyu-Kyushu Arc; North Pacific, NW; earthquakes; arc tectonics ... 3119
plate margins (More at LITHOSPHERE ...)
plate motions
interferometry, very long baseline; U.S. report to IUGG 867
tectonophysics, 1987-1990; U.S. report to IUGG ... 868
crustal deformation; U.S. report to IUGG ... 869
seismic tomography; geoid; U.S. report to IUGG ... 887
Neogene; North Pacific, NE margin; crustal deformation 1481
constraining; Indian Plate; geodetic surveys, need for 1482
Philippine Sea Plate; tectonics; VLBI measurements ... 1491
Africa, absolute motion during the past 30 myr; two-stage model ... 1493
Sumatra; arc tectonics; crustal deformation ... 1539
Sierra Nevada-North America motion; U.S., W, kinematics; VLBI measurements ... 2121
Paleozoic, Late; South America; tectonics, rotations; paleomagnetism ... 2139
parameters; geodesy; VLBI and SLR baseline length changes . 2140
velocities, inferences from; mantle viscosity ... 2156
Mexico; subduction zones; earthquakes; tectonics, implications ... 3126
plate tectonics (See also continental drift, Gondwana, SPREADING, subduction, Vine-Matthews hypothesis, Wilson cycle; more at TECTONICS ...)
reconstructions; stromatolites; heliotropism ... 317
crustal deformation; conference papers; 17 papers, 29 selected abstracts ... 361
kinematic models; North American Plate; Caribbean Plate; plate boundary zone ... 363
Jurassic, Late, since; South Atlantic, evolution ... 365
Cenozoic; Pacific, W; Tethys; paleogeodynamic maps 366
North American Plate; deformation, dynamics ... 368
Indian Plate; Australian Plate; relative motions last 20 Myr 369
Gondwana, reconstruction; India, S; Antarctica, E ... 370
change in activity over the past 150 Myr ... 374
Antarctic Ice Sheet; Gondwana, break-up, possible trigger for ... 429
Tertiary, Mid-; North American Cordillera; magmatism; 29 papers ... 856
seismotectonics; U.S. report to IUGG ... 890
sea level, short-lived global fluctuations; epeirogeny; relationships ... 1422
North American Plate, active fragmentation; Mexico, off Manzanillo; triple junctions ... 1478
reflections of the past two decades ... 1490
Azores Triple Junction, evolution ... 1492
mantle plumes, starting; continents, breakup, role in ... 1528
delayed discovery?; lithospheric heat flow, misconceptions . 1742
driving forces, constraints ... 2135
kinetic energy, equipartition ... 2137
plateaus: oceanic
origin; Ontong Java Plateau; Manihiki Plateau; mantle plumes ... 1538
mantle plumes; flood basalts; volcanism, initiation of, model ... 2146
plates
work-hardening plastic, necking; lithospheric breakup; tectonics; rifting ... 2627
lithosphere, dynamics; crust; approach to modelling ... 2649
plates: lithospheric
paleoplates; mantle, upper, buried in; subduction, cyclic character; tectonics ... 888
Peru-Chile Trench, studies in; curvature and elastic thickness relationships ... 1489
plates: subducting
above; lithosphere; seismic anisotropy ... 903
platform scarps
elevation; shores; wave height, and rock strength, influence; laboratory approach to the problem ... 3047
platforms (More at STRUCTURES ...)
platforms: offshore
drilling, from; Beaufort Sea; sound, underwater, measurements; acoustics ... 712
wave forces, measured and predicted ... 1723
platforms: oil
around; Brazil, Rio Grande do Norte; zooplankton ... 2693

Pleistocene
Northern Hemisphere; glaciationimulation of the last cycle; climate ... 130
highstands, as cause; South Africa, Durban; shoreline dynamics; coastal sediments, diagenesis ... 250
Mid-; Ryukyu Arc; North Pacific, NW; corals, ESR ages ... 315
Late; North Pacific, W; continental climate; paleoceanography, oceanic variability; sediments, recorded in ... 838
Late; Holocene; Japan; sea level, changes; tectonics, implications for; mantle rheology ... 864
ice age carbon; carbon storage and transfer between marine and terrestrial reservoirs ... 1116
Late; Israel, N; Mediterranean Sea; shelf sediments; origin of submerged marine terraces ... 1396
Valday time; Barents Sea, shelf; Scandinavian Ice Sheet; ice sheets, maximum advance ... 1423
during last glacial maximum; North Atlantic; surface salinity ... 1424
Early; Pliocene, Late; Mediterranean Sea; sapropels; geomagnetic field, Gauss to Matuyama; astronomical calibration, implication for the polarity time scale ... 1429
modelled; paleoclimate ... 1431
Late; Pacific, W equatorial; Ontong-Java Plateau; carbonate sediments ... 1442
upper; Weddell Sea, N; diatoms, unusual layers; sediments 1450
Late; Iceland, beneath Snaefellsjokull Volcano; mantle melting, increased; deglaciation, during; volcanism ... 1498
Pliocene; Australia, W margin; shoreline dynamics; coastal zone, events, history ... 2022
Bannock Basin; Mediterranean Sea; sediments, facies analysis; tectonics, evolution, key to reconstruction ... 2064
Pliocene; Tyrrhenian Sea; sapropels ... 2092
Late; Pacific, W equatorial; bathyal thermocline; water masses, glacial deep-water properties ... 2094
Pliocene; North Pacific; paleoclimate, evolution; fossil record ... 2099
last glacial; North Atlantic; thanatocoenoses, submerged; fossil record, southward faunal shifts ... 2110
climate, regimes; stochastic resonance model ... 2502
Pleistocene-Holocene boundary
dendrochronology; stable isotope tree ring time scale ... 2080
Plesionika
crosnieri n.sp., and P. edwardsii; Pandalidae; similarities ... 2275
Pleurostomella
concava n.sp.; Oligocene, and Miocene sediments; Indo-Pacific; Foraminifera, benthic ... 328
Pliocene
and Pleistocene; Pacific; calcium carbonate, preservation; oxygen, O-18; paleoceanographic and paleoclimatic implications ... 1425
Late; Pleistocene, Early; Mediterranean Sea; sapropels; geomagnetic field, Gauss to Matuyama; astronomical calibration, implication for the polarity time scale ... 1429
to Quaternary; North Sea, S; lithosphere, dynamics; basin subsidence ... 1535
Pleistocene; Australia, W margin; shoreline dynamics; coastal zone, events, history ... 2022
Late; Mediterranean Sea, central; glaciation, glaciations; continental and marine responses ... 2083
North Atlantic; Ostracoda; paleoceanography, shallow-water; fossil record ... 2085
climate; paleoclimate; AGU meeting, papers ... 2086
during; North Atlantic; surface temperature ... 2090
paleoclimate, reconstruction; fossil record, dinoflagellate cysts; methods comparison ... 2091
Pleistocene; Tyrrhenian Sea; sapropels ... 2092
Southern Ocean; paleoclimate, evolution; sea level, ice cover, and circulation ... 2095
chronology; U.S., mid-Atlantic coastal plain; sea level, fluctuations ... 2097
Pleistocene; North Pacific; paleoclimate, evolution; fossil record ... 2099
Eniwetok Atoll; Pacific, tropical; sea level, change ... 2102
site; Florida, near Sarasota; fossil record; chronostratigraphy, linking marine and terrestrial ... 3073
plumes: bubble
acoustic scattering ... 93
plumes: hydrothermal
mega-; North Pacific, NE; Juan de Fuca Ridge, Cleft segment geology; seafloor spreading; lava, recent flows 873
iron, dissolved; manganese, dissolved; in-situ chemical mapping ... 1409
baroclinic vortices, shedding ... 2478
signatures; Mid-Atlantic Ridge ... 2601
particulates, sampling, analysis ... 3019
Mid-Atlantic Ridge, 26°N; structure, mass, interactions ... 3064
plumes: mantle
Hawaii; hotspot volcanism; magma melts, generation ... 395
mid-ocean ridges; interactions, fluxes and temperatures ... 415
symposium report ... 613
superplumes; volcanism; paleoclimate; relationship hypotheses; report ... 1115
superplumes; Cretaceous, Mid-; carbon dioxide; global warming ... 1421
starting; continents, breakup, role in; plate tectonics ... 1528
superplumes; geological consequences ... 1536
Ontong Java Plateau; Manihiki Plateau; oceanic plateaus, oringin ... 1538
flood basalts; volcanism, initiation of, model; oceanic plateaus ... 2146
Aptian; Ontong Java Plateau; Indian Ocean; volcanism, flood basalt ... 2148
heads; surface, Earth, interaction with; volcanism, flood basalt; onset of small-scale convection ... 2158
deep; Hawaii; Iceland; East African Rift, System, Nyiragongo/Nyamuragira; Antarctica, Mt. Erebus; hotspot volcanism; great circle distribution ... 2159
hotspots, and pre-existing thinspots; continental lithosphere 2655
plumes: odor
chemical sensors; instrumentation, submersible ... 1304
plumes: river
nutrient-rich; Mississippi River; Copepoda, nauplii, associated ... 2675
plumes: turbid
France; Gironde Estuary; satellite data ... 668
plumes: turbidity
dredging, induced by ... 2352
plumes: turbulent
generated by; gravity currents; sedimentation ... 2039
plutonic rocks (More at IGNEOUS, ROCKS ...)
plutonium
isotope ratios; Baltic Sea; sediments ... 780
and americium; Polychaeta; Nereis, diversicolor; sediments, contaminated; bioaccumulation; radionuclides 1701
Po River
Delta; Italy, Emilia-Romagna coast; coastal sediments; cesium, -137, distribution ... 270
Pocillopora
damicornis, planulae; pesticides, carbaryl, naphthol, chlorpyrifos, effects of; corals, larval ... 1027
damicornis, planulae; petroleum, products, effects; corals, larval ... 1045
damicornis; corals; zooxanthellae, pattern and rate of release; N-enrichment vs normal conditions ... 2793
Pocilloporidae
Pacific, E; corals, reef-building; reproduction ... 994
pockmarks
gas-related; Canada, E; shelf sediments; gases, vents ... 2055
Baltic Sea, area; Skagerrak; sediments, gas-charged; clay diapirs ... 3133
Point Arena
California, N, off; current filaments, cold; physical structure June 1987 ... 673
poisoning: shellfish
paralytic; California; prevention program 1927-89 ... 588
polar lows
Arctic area; weather forecasting; model sensitivity experiments ... 1949
polar seas
importance in; Greenland Sea, for instance; plankton, nanno-, pico-; in German, English abstract ... 441
Prymnesiophyta; Phaeocyctic, blooms, importance; carbon cycle ... 950
primary production; role of environmental controls ... 2696
in; enzymes, extracellular; microbial metabolites; temperature, effects ... 2779
water masses, High-Salinity Shelf Water formation ... 2907
Arctic area, environments; remote sensing; environmental monitoring; resource management; symposium papers 3227
Alaska; ice; remote sensing ... 3237
polar stratospheric clouds
Antarctica, over; atmospheric particulates; aerosol types, temperature, ozone layer implications ... 1300

polar wander (More at TECTONICS ...)
polarity reversals
and the two dynamo families; geomagnetic field, long-lived transitional states ... 2621
policy (More at GOVERNMENT, LAW ...)
advice; climate change, greenhouse-induced; scientists, dilemma ... 603
biodiversity, studies; science; extinctionates increasing as a result of human activity ... 1121
policy: erosion
national, needed; South Carolina, Folly Beach; coastal development; hurricanes, Hugo 1989; CZM, failings . 2875
politics: environmental
Japan ... 1738
pollen (More at FLORA ...)
palynological strew mounts; microscope mounts, and specimen location technique ... 3082
pollen analysis
Holocene; palynology; paleoclimate; principles, population and community ecology, paleoclimatology; review ... 2107
pollutant deposition
dry, modification; sea breezes, developing circulation ... 1948
pollutant discharges
U.K., Severn Estuary; environmental assessment ... 590
pollutant transport
and dilution, wind-augmented; shallow-water flows ... 1091
pollutants
aromatic DNA-carcinogen adducts; Arctic area, off Canada; Cetacea, beluga whales ... 1708
biodegradation, predicting biodegradability; structure activity relationships ... 2327
enrichment; microbial food webs, sensitivity; eutrophication ... 3222
polluted sediments
bioavailability of pollutants; in French, English abstract ... 562
pulp mill; Quebec, Saguenay Fjord; Foraminifera, and thecamoeban distributions ... 565
mercury, desorption ... 1989
drilling muds, low-toxicity base oil; hydrocarbon degradation ... 1994
pollution (See also outfalls, sewage, WASTE ...)
Greece, Thermaikos Gulf; Mediterranean Sea; pesticides; runoff ... 226
transfer from unpolluted to polluted sites; fouling communities; impact on community structure ... 558
natural waters; contaminants, accumulation, transfer, transformation chemistry; multicompartment ecotoxicological models; in French, English abstract ... 563
hazardous waters; diving; hypothermia; symposium papers; 16 papers ... 586
Massachusetts; Cape Cod; water resources; problems reaching crisis proportions ... 619
Australia; Sydney, area offshore; silicones, polyorganosiloxanes ... 799
Mediterranean Sea, W; Rhone Delta; hydrocarbons ... 804
effects; Crustacea, estuarine, 2 spp., genetic structure; organophosphates ... 1041
assessment tools; Protozoa, importance ... 1044
massive; Hong Kong, Tolo Harbor; editorial; the decline goes on ... 1089
Australia; Great Barrier Reef; coral reefs; opinions; 4 papers ... 1095
implications for; U.K.; convergent fronts; estuaries ... 1725
Baltic Sea; Finland; Gulf of; eutrophication ... 1728
chronology; Turkey; Golden Horn; sediments ... 1997
20 years after abatement of source; Finland; aquatic ecosystems; mercury, concentrations ... 2326
-related differences; New Zealand, Manukau Harbour; Bivalvia; Crassostrea, gigas, condition cycles ... 2331
presence of; Greece; Thermaikos: Gulf of; zooplankton, populations, differentiation ... 2335
Chesapeake Bay; toxic chemicals; viewpoint ... 2871
Brazil, coastal region; cadmium; zinc ... 3036
India; Bombay; heavy metals, distribution; seawater; particulates ... 3037
Baltic Sea; eutrophication; benthic communities, impacts on ... 3148
specific effects; biota, aquatic; impact assessment; usefulness of numerical methods ... 3208
Mediterranean Sea; tin, organotins; continuing cause for concern ... 3239
assessment, regulations, prospects; France, environmental problems; tin; tributyltin ... 3240
pollution assessment
natural waters; sediments; evolution of concepts and methods; 6 papers; in French, English abstracts ... 594
pollution bioassays
Echinoidea; urchins, sea urchin eggs; enhancing sensitivity . 2323
pollution: chemical
North Pacific, W ... 1998
North Sea, concentrations in; tankers, operational discharges from ... 2358
pollution: copper
Maryland, Patuxent River; Bivalvia, oysters; bioindicators 2337
pollution: environmental
mercury; conference papers ... 2359
pollution gradients
along; benthos, temporal changes; sewage outfalls; discriminating natural phenomena effects ... 2318
pollution indicators
England, Southampton Water; Foraminiferida, benthic ... 2334
pollution: mercury
Chaetoceros, sp, effects on; seawater; nutrients, phosphorus-limited conditions; in Chinese, English abstract ... 569
pollution: metal
sediments; evaluation; in French, English abstract ... 230
pollution monitoring
U.K., monitoring programs, impact assessment, disposal licensing, etc.; contaminants, non-radioactive; ocean waste disposal; MAFF report 1988-89 ... 1088
Antarctica, environment; hydrocarbons, baseline; review .. 1988
fish; EROD methodology, measurements ... 2841
Europe; biomonitoring; water quality, issues; report of the ICES Advisory Committee ... 2868
Chesapeake Bay; tin; tributyltin; statistical modelling of data ... 3039
biomonitoring, long-term; contaminants; Southern and Northern Hemisphere perspectives ... 3247
tin, organotin; tributyltin; symposium ... 3248
pollution: oil
estuarine; intertidal sediments; long-term chemical assessments ... 805
Antarctica; penguins, effects on energy metabolism and physiology ... 1700
pollution: organotin
widespread; Gastropoda, dog whelks, imposex in; tin ... 1710
pollution: petroleum
Mexico, Tabasco shelf; sediments ... 1351
pollution: plastic
garbagen remote oceans; letter ... 589
pollution: sewage
bacteriology, quantitative and qualitative; surface microlayer ... 2330
gradient; meiobenthic communities, response ... 2332
poly-B-hydrooxybutyrate (Use PHB)
Polychaeta
Nereis, virens, burrows; denitrification, and dissolved inorganic nitrogen exchange; direct measurement ... 466
Lycastis ouanaryensis; India, Thane creek; metals, heavy ... 544
Nereis, diversicolor; sediment-water interface; phosphates, dissolved, effects on exchanges ... 791
utilization by; Bivalvia, utilization by; Abra, alba; Eupolymnia, nebulosa; fumigated sediments ... 973
Nereis, diversicolor; sediments, contaminated; plutonium, and americium; bioaccumulation; radionuclides 1701
2 n.gen., 14 n.spp.; North Atlantic, W, slope and rise; Ophryotrocha, generic revision ... 2265
Arenicola, marina, burrows; intertidal sediments; bacteria, impact on ... 2733
sedentary; sediment communities; radionuclides, Rn-222, transport; advection-diffusion model ... 3049
polychlorinated biphenyls (Use PCB's)
polynyas
measurements in; Chukchi Sea; sea ice, thickness ... 2926
location, extent; Bering Sea; Chukchi Sea; sea ice ... 2935
polysaccharides
exo-, production; bacterial metabolites; hydrothermal vent microbiota ... 2776
particulates; lipids; amino acids; extraction, analysis ... 3017
Polysiphonia
lanosa; Nova Scotia; kelp; ecology, distribution ... 2304

Pomatoschistus
minutus (Pisces); Baltic Sea; Saduria, entomon (Crustacea); benthic communities, macro-, meiofauna; predation, by fish, crustaceans 966
Pontonia
pinnophylax, type species; Australia, South; Pontoniinae; Notopontonia, platycheles n.gen., n.sp. 2800
Pontoniinae
Australia, South; Pontonia, pinnophylax, type species; Notopontonia, platycheles n.gen., n.sp. 2800
Pontoporeia
affinis; Amphipoda; currents, response to; factors affecting horizontal migration 1681
affinis, femorata; Baltic Sea, archipelago; Amphipoda, benthic; production 2290
population densities
sampling, optimum size unit 430
population dynamics
growth; Gorgonacea; corals 504
commercial fisheries; fisheries management; reprinted classic of theoretical biology 600
Bivalvia; Mytilus, edulis, variations in age-class densities; estuarine communities 978
genetic response; California Current; Copepoda; Metridia, pacifica; eddies, coastal, response to 1003
Calanoida; Pseudodiaptomus, hessei, in a warm temperate estuary; productivity, secondary 1006
food-signal theory; population regulation and the functional response 1582
and community structure; India, W, Konkan; sediment communities; macroinvertebrates 2716
Chesapeake Bay, marsh; Brachyura; Callinectes, sapidus 2823
effects on structures; Bivalvia; organochlorine pesticides, chlordane 2846
growth and stabilization 2848
equations, interpretation; plankton 2849
populations: exploited
marine, dynamics; recruitment, variability 1098
populations: invertebrate
natural; genetic variation, high levels 2269
populations: microbial
Prince William Sound; hydrocarbon biodegradation, potentials; sediments, shoreline, fertilized; Exxon Valdez, spill 1705
Porcupine Basin
Tertiary, Late; Ireland; sediments, slump structures 1397
pore water (More at WATER ...)
uranium, determination by isotope dilution ICP/MS 184
North Sea, Jade region; sand flats; surface moisture; salinity; in German, English abstract 192
nutrients, profiles; deltaic lagoons; benthic fluxes 1975
acetates, concentrations 2555
parameters; marsh sediments, salt; sulfur, reduced, variability 2594
Porifera
Mexico, Cozumel; coral reefs; fish; hurricanes, Gilbert, effects 971
Canada, W; sponge bioherms; shelf 2104
porosity
sea ice; chlorophyll, content; relationships 1845
crust, seismic structure; importance of aspect ratios 2181
porosity: sediment
British Columbia; Knight Inlet; determinations using a transient electromagnetic system 1388
porous bottoms
gravity waves 1824
porous media (More at SEDIMENTS ...)
porpoises
tuna, yellowfin, schools; sharks; seabirds; polyspecific associates 1622
harbor; Denmark; Greenland; Cetacea; organochlorines 2321
dolphins, protection; Cetacea; tuna fisheries, commercial seiners; vessel registry, foreign-flag; are regulations increasing foreign-flag registration? 2366
Portugal
off; upwelling, increased; glaciation, last, during; diatom evidence 307
N coast; Bivalvia; Mytilus, edulis; metals 546
Ria Formosa; bacterioplankton, abundance, biomass; spatiotemporal variations 2721
Posidonia
oceanica; Codium, tomentosum; metals, Hg, Cd, Pb 1030
positioning
GPS marine applications; Global Positioning System; geodesy 1724
positioning data
satellites, U.S. GPS; discontent over restrictions on data 1104
positioning: global
crustal deformation; spectral comparison of GPS and strainmeter measurements 905
satellites; U.S. report to IUGG 1080
positioning: satellite
Global Positioning System, introduction to; geological applications 1081
Potamalpheops
hanleyi n.sp.; Australia; Alpheidae 2801
Potamocaris
including 2 n.spp.; Copepoda, harpacticoid 1010
potassium chloride
seawater; sodium chloride; activity coefficients 193
potassium, rare-earth elements and phosphorus (Use basalts: KREEP)
potassium-argon dating (More at DATING ...)
Poupinia
hirsuta, remarks on; North Pacific; Mariana Islands; Brachyura, majid; Bothromaia, griffini n.gen., n.sp.; Homoloidea, poupiniid 2294
power (See also ENERGY, fuel, HYDROCARBONS, INDUSTRY, offshore-, OTEC ...)
prawns (More at SHELLFISH ...)
precipitable water
atmosphere; radiance, IR satellite images, estimates from .. 1898
precipitates: carbonate
$CaCO_3$; bacteria, as inducers; mineralogy, and medium viscosity; relationships 268
precipitation (See also rain ...)
analysis; trace elements, content 154
oceanic; rainfall; estimating the diurnal cycle from SSM/I data 1289
chemistry; North Atlantic, over, Dakar to Woods Hole; atmospheric chemistry 1939
and kinematic structure; atmospheric convection; convective line structure 2523
and kinematic structure; atmospheric convection; momentum transport, and generation 2524
estimation; satellite data 2542
field over NW Mexico; Pacific, E, tropical perturbations; air-sea interactions; El Niño; relationships 2959
precipitation chemistry
Indian Ocean, variability over; Amsterdam Island, 1980-87 2541
precipitation: global
climatologies; model and observations compared 1931
predation
on infaunal clams; Brachyura; Callinectes, sapidus; foraging, density-dependent, and mutual interference 470
by fish, crustaceans; Baltic Sea; Pomatoschistus, minutus (Pisces); Saduria, entomon (Crustacea); benthic communities, macro-, meiofauna 966
strong or weak?; New England; intertidal zone, rocky; generalizing from experiments 2203
massive; Scleractinia; Echinodermata; Acanthaster, planci, outbreaks; are they novel events?; coral communities 2241
effects of; Acanthaster, planci, by; corals, massive, 2 spp. ... 2709
Cnidaria; Ctenophora; plankton, competitors in; review .. 2791
predator-prey dynamics
corals, *Pocillopora johnstonianus*; fish, coral-feeding, damselfish; trophic energetics 919
Harpacticoida, sediment-dwelling, impact on; epifauna, large, disturbance by; seagrass communities 985
grazing, prey-size dependency; flagellates, free-living 1606
subtidal communities, rocky; benthic fauna 472
predators
birds, mammals; Southern Ocean; food webs, unusually simple; a major leak in the biological carbon pump 433
benthic, from; Bivalvia; Argopecten, irradians, as prey; eelgrass beds, canopy as refuge 981
rapid response to; zooplankton; migration, diel vertical 2209
pressure (More at FLUID DYNAMICS ...)
measurements just above the water; wind waves; swell 1176
pressure: atmospheric
variations; North Atlantic, tropical, subtropical; surface temperature, anomalies; relations 2955

systems; Southern Oscillation; El Niño; influence on the subtropical high ... 2961
pressure: bottom
West Spitsbergen Current; Arctic Ocean; currents, seasonal variations ... 1806
pressure ridge<s> (More at ICE ...)
pressure: sea level
El Niño, ENSO events; Southern Oscillation; Darwin-Tahiti SOI data back to 1876, comparison with recent ENSO events ... 137
pressure sensors
anemometers; improved version ... 734
CTD; temperature, dynamic response to ... 1951
pressure waves (More at WAVES ...)
prey
pelagic; fish, benthopelagic ... 1628
primary production (See also phytoplankton, PLANKTON; more at PRODUCTION ...)
eddy pumping, role of ... 437
C-14 method; interlaboratory comparison ... 453
phytoplankton; measurement by the acidification and bubbling method ... 454
winter; Quebec; Saguenay Fjord ... 924
California, N, coastal transition zone; nutrients, distribution, effects; current transport; phytoplankton, biomass, species composition ... 925
microalgae, response; light, changing ... 929
North Pacific, central gyre; subtropical gyres ... 934
North Atlantic; remote sensing, basin-scale estimates ... 946
North Pacific; atmospheric iron, deposition; phytoplankton, responses ... 955
South Africa, 3 eastern Cape estuaries; phytoplankton biomass ... 1587
Antarctic Peninsula; Bransfield Strait, region; phytoplankton ... 1595
estimation by compound remote sensing ... 1614
Kuroshio, at eddy boundaries; oxygen, supersaturation ... 2225
Antarctica, Signy Island; benthic microalgae ... 2309
Mediterranean Sea, W; pigments, distribution ... 2686
polar seas; role of environmental controls ... 2696
Scleractinia; respiration, dark; corals, in; flow effects ... 2790
phytoplankton biomass; characterization of brackish waters of different trophic levels ... 3162
way to estimate; Arctic Ocean; Canada Basin; water masses, age of deep waters ... 3257
Prince Edward Islands
Southern Ocean; seabirds; ornithological research; review ... 2719
Prince William Sound
microbial populations; hydrocarbon biodegradation, potentials; sediments, shoreline, fertilized; Exxon Valdez, spill ... 1705
Alaska; oil spills; bioremediation, efforts, results of; Exxon Valdez ... 1726
Alaska; oil spills; Exxon Valdez; bioremediation, and other strategies; situation update ... 1727
Alaska; bioremediation, effects; mutagenicity, on; oil spills; Exxon Valdez ... 2356
Processa
n.sp.; Bermuda; Caridea ... 516
production: bacterial
nutrients, influence ... 2745
production: chlorophyll
enhancement; Gulf Stream; seawater, surface; nitrates, rainwater ... 2234
production: community
North Pacific, Subtropical Gyre; productivity, gross; oxygen, respiration; in-vitro and in-situ rates ... 1620
production: petroleum
activities; macrobenthic communities, effects on; production water discharges ... 2329
production: phytoplankton
and size fractionation; Black Sea, winter, spring ... 447
production: primary
eddy pumping, role of ... 437
C-14 method; interlaboratory comparison ... 453
phytoplankton; measurement by the acidification and bubbling method ... 454
winter; Quebec; Saguenay Fjord ... 924
California, N, coastal transition zone; nutrients, distribution, effects; current transport; phytoplankton, biomass, species composition ... 925
microalgae, response; light, changing ... 929
North Pacific, central gyre; subtropical gyres ... 934
North Atlantic; remote sensing, basin-scale estimates ... 946
North Pacific; atmospheric iron, deposition; phytoplankton, responses ... 955
South Africa, 3 eastern Cape estuaries; phytoplankton biomass ... 1587
Antarctic Peninsula; Bransfield Strait, region; phytoplankton ... 1595
estimation by compound remote sensing ... 1614
Kuroshio, at eddy boundaries; oxygen, supersaturation ... 2225
Antarctica, Signy Island; benthic microalgae ... 2309
Mediterranean Sea, W; pigments, distribution ... 2686
polar seas; role of environmental controls ... 2696
Scleractinia; respiration, dark; corals, in; flow effects ... 2790
phytoplankton biomass; characterization of brackish waters of different trophic levels ... 3162
way to estimate; Arctic Ocean; Canada Basin; water masses, age of deep waters ... 3257
productivity
changes revealed by diatoms; Peru; Quaternary, Late; coastal upwelling ... 331
oceanic, changing; climate change; global warming, probable effects ... 431
Mediterranean Sea, Iroise Sea; nutrients; stratified ecosystems, shallow ... 436
pelagic, changes in; Finland: Gulf of, W; nutrients, reserves, long-term changes in ... 931
primary, limitation; Mediterranean Sea, E; phosphorus ... 937
Baltic Sea, Patchiness Experiment; chlorophyll, -a concentrations; plankton; measurements intercomparison ... 939
controls on; phytoplankton; environment, physical structure, optics ... 947
mid-ocean ridges, influences of; chlorophyll; effects on large-scale patterns ... 954
secondary; Calanoida; Pseudodiaptomus, hessei, in a warm temperate estuary; population dynamics ... 1006
paleo-; Quaternary, Late; Labrador Sea; carbon, organic, cycles ... 1440
primary; mass extinction; selection, ecological selectivity ... 1453
Alboran Sea; deglaciation, during ... 1455
ocean surface; ferromanganese nodules, composition; seafloor, oxidation rates; relationships ... 1571
gross; North Pacific, Subtropical Gyre; community production; oxygen, respiration; in-vitro and in-situ rates ... 1620
Vietnam, off; metabolism; coral reefs, ecosystems ... 1645
Antarctic Peninsula; Bransfield Strait, region; microbial biomass ... 1655
ecosystems, system-level indicators of dynamics; biomass; body-size spectra ... 2199
Antarctica, waters around; sea ice; epontic communities, structure ... 2214
keystone species; mangrove forests, dynamics; nutrients, soil; crabs, burrowing, influence ... 2254
benthic microalgae, intertidal; tides, stage, effects; light, sun angle effects ... 2310
paleo-; Pacific, W equatorial; Foraminifera, benthic, fossil record; paleoceanography, glacial to postglacial change ... 2608
and species changes; Benguela Upwellings; phytoplankton biomass ... 2685
low; bacterioplankton, pelagic ... 2734
Baltic Sea, trend analysis; chlorophyll; zooplankton, biomass; transparency, water ... 3149
Gulf Stream, frontal eddy influence; U.S., shelf; shelf communities ... 3256
productivity: global
ocean; coral reefs, role ... 1634
professional associations
U.S.; government employees; current ethics proposals harmful to scientists ... 1105
profilers (More at OCEANOGRAPHIC APPARATUS ...)
profiling (More at SEISMOLOGY ...)
propagating ridges
at; transform faults, zone migration; implications of bookshelf faulting ... 2138
propagating rifts
Eocene; South Pacific, W, and Nazca Plate; tectonics ... 2625
propulsion
systems; ships; submarines; magnetohydrodynamic thrusters; theory, pros and cons ... 1079
Prorocentrum
micans; Dinoflagellata; migration, vertical; phototaxis, and gravitaxis ... 538

minimum: Dinophyceae; nitrates, uptake; phytoplankton growth ... 543
prospecting (See also exploration ...)
protease activity
determinations; bacteria, activity, limiting factors ... 2727
protein synthesis
and DNA synthesis, rates; tropics, coral reefs vs pelagic waters; bacterial assemblages ... 2264
proteins
particulates; seawater, electrophoretic separation in ... 3025
Proterozoic
end; fossil record; evolution, why macroscopic animals appeared so late ... 1713
Protista
in; particle ingestion, measurement; comment, cautions ... 916
proto-Atlantic (More at Atlantic ...)
Protozoa
importance; pollution, assessment tools ... 1044
density-dependent effects on assemblages; plankton growth, pico-, nanno- ... 1590
grazing by; cyanobacteria, chroococcoid; bacteria, heterotrophic; plankton, communities ... 2673
by; biofilmstructure, disruption ... 2827
planktonic, importance to; Baltic Sea; eutrophication, process ... 3150
Prydz Bay
Antarctica; Euphausiacea, larval abundance, distribution ... 511
in summer; Antarctica; Euphausia, superba; krill, post-larval, distribution and abundance ... 2219
Prymnesiophyta
Phaeocystic, blooms, importance; carbon cycle; polar seas 950
psammon (More at interstitial fauna ...)
Pseudodiaptomus
hessei, in a warm temperate estuary; Calanoida; productivity, secondary; population dynamics ... 1006
Pseudodulichia
n.gen.; Antarctica; Amphipoda, gammarid; in German, English abstract ... 3192
Pterochirella
tuerkayi n.gen., n.sp.; Aden; Gulf of, deep; Calanoida ... 3193
Pteropoda
Norwegian Sea, in autumn; sedimentation ... 2208
public administration (More at GOVERNMENT...)
public media (More at COMMUNICATIONS ...)
publishing
scientific journals; libraries; increasing numbers, increasing costs; French and English ... 606
peer review, criticized; science ... 1739
scientific journals; Continental Shelf Research; review ... 2373
publishing: science
peer review; due for an overhaul ... 601
Puget Sound
Washington State; density intrusions; circulation ... 1130
pump samplers (More at SAMPLERS ...)
pumps
in-situ; suspended matter; particulates, collection for trace analysis ... 3022
pycnocline
salt finger susceptibilities; South Atlantic; density, ratio distribution ... 625
blooms in; Dinoflagellata; Gyrodinium, aureolum; plankton, decimeter scale heterogeneity ... 922
topography; Bering Sea, Anadyr Strait; water column, structure; seabirds, alcid, influence on marine distributions 1650
Richardson numbers; density, probability distribution; currents, velocity fluctuations; analytic approximation ... 1888
salt wedges, stationary; numerical 3-layer model ... 2482
pycnocline shoaling
Mediterranean Sea, E; sea level, lowering, due to ... 1439
Pygoscelis
adeliae; Antarctica; humans; aircraft; penguins, Adelie, effects on ... 2870
pyroclastic debris
fallout; volcanic eruptions, submarine; sediments, volcanic deposits ... 376
pyroclastic debris flows
Japan, shallow submarine Shirahama Group; paleomagnetic evidence ... 3110
pyrolytic analysis
chromatography; spectrometry; analytical chemistry; recent developments ... 2968
Qatar
coast; heavy metals; algae ... 1702
quantitative analysis
techniques for studying the environment; environmetrics; modelling, valuing, estimating, predicting, decision-making support systems; special issue ... 2343
quartz
detrital grains; India, off Kerala; coastal sediments; surface microtextural study ... 2595
Quasi-Biennial Oscillation
atmospheric waves; mean zonal flow response to Rossby and gravity wave forcing ... 1926
quasihomogeneous layer (More at LAYERS ...)
Quaternary
Late; Iceland, northern; sea level, rising; shoreline dynamics; deltas, and spits, littoral terraces ... 260
Late; Korea, W coast, Gunhung Bay; bay sediments; shallow seismic stratigraphy, distribution pattern ... 298
Africa, NW and E margins; continental environments; margin sediments, recorded by ... 311
Late, during summer; Arabian Sea; atmospheric circulation, paleo-; coastal upwelling ... 322
Late; Peru; coastal upwelling; productivity, changes revealed by diatoms ... 331
Greece, S Evvoikos Gulf; sea level, changes; tectonics, extensional ... 356
Sulawesi, NE; lava, geochemistry; magma, source chemistry; volcanic rocks ... 392
Late; South China Sea; volcanic sediments; origin, research; in Chinese, English abstract ... 397
World Ocean; Foraminifera; Globigerinita, clarkei ... 521
climate, records; paleoclimate; strategy for frequency spectra 833
paleoceanography, paleochemistry; U.S. report to IUGG ... 834
sediments; seawater; organic matter; carbon, isotopic record, variations ... 842
Late; British Columbia; Fraser River, Delta; Foraminifera, biofacies succession ... 848
Late, evolution; Nile Delta, Burullus Lagoon region; delta sediments; shoreline dynamics ... 1365
Latest; Africa, NW, off; upwelling, variability; fossil record, diatom evidence ... 1417
Mediterranean Sea; Cyprus; crust, uplift; sea level, change ... 1438
Late; Labrador Sea; carbon, organic, cycles; productivity, paleo- ... 1440
Late; Indonesia, E; sediment cores; palynology ... 1441
Spitsbergen; light, intensity and spectra effects; sediment thermoluminescence, reduction; implications for dating sequences ... 2002
Maine; Gulf of; shelf sediments; stratigraphy ... 2016
Late; Canada, E; Nova Scotia, off; shelf sedimentation; sea level, changes ... 2056
Late, alteration during; Black Sea; sediments, S, O, and C isotopic composition ... 2071
Late; Pacific, W and central equatorial; Radiolaria; biogeography and paleoecology ... 2103
Late; Lake Tanganyika; Africa, East; sediments; paleomagnetism, oscillations, chronological potential ... 2119
Late; Canada, W; tectonics; shelf sediments; glacial troughs ... 2126
Late; North Pacific, W; Ryukyu Trench, slope; sediments; paleoceanography, record ... 2611
China, mainland; sediments; climate, and climate change; paleoenvironments; collection ... 3069
Late; Arctic area; sediments; magnetostratigraphy; in German, English abstract ... 3075
Djibouti; Asal Rift; crustal deformation; spreading ridges, slow-, mechanics ... 3093
Quebec
Saguenay Fjord; Foraminifera, and thecamoeban distributions; polluted sediments, pulp mill ... 565
Saguenay Fjord; primary production, winter ... 924

radar
SIR-C/X synthetic aperture radar system; satellites, and Space Shuttle; imaging systems ... 1055
SAR, focusing; waves; remote sensing, imagery ... 1174

sea spikes at low grazing angles; waves; lab studies 2484
radar altimeters (More at ALTIMETERS ...)
for the TOPEX/POSEIDON project 1065
radar altimetry
waves, measurements; 1978-88 experimental results 683
waves, studies 686
waves; satellites, Seasat observations 693
surface, range measurements; frequency dependence of electromagnetic bias 2407
radar imagery
remote sensing; focusing SAR images with long integration times 1125
waves, monochromatic; currents; simulation 2894
role; Canada, development; Arctic area; background, applications 3229
radar: satellite
scatterometry; wind, velocity measurements; overview of the NSCAT system 1058
remote sensing; variance of the normalized radar cross section 2392
radar scattering
waves; wavelet analysis 684
radar: spaceborne
planetary research; microwave remote sensing, and telemetry; Magellan (Venus) and various earth observing systems; 8 papers 1057
radiance
atmospheric aerosols; clouds; interactions, climate modelling implications 772
IR satellite images, estimates from; precipitable water; atmosphere 1898
radiation (See also irradiance, LIGHT ...)
processes; stratosphere; photochemistry; interactions 159
sea ice; radiative transfer model with vertical structure variations 1203
solar; surface temperature; cloudiness; recent interannual variations 1254
UV-B, penetration; Norwegian Sea 1258
upward, angular dependence of polarization; surface, from ... 1260
Cherenkov; cosmic particles; deep-water module for recording 1900
solar; Miocene, Late, since; insolation, values; climate, past 10 myr 1903
upward, spectra; particulates, concentration, evaluation; Secchi disk, visibility depth 1980
global budget; remote sensing; estimation from satellite observations 2498
Earth budget; clouds; hydrologic cycle; modelling 2504
climate, studies; clouds; remote sensing, operational satellite data 2505
UV and visible, influence of; surface microlayer; glucose, uptake; carbon dioxide, production 2728
UV, function of dose and dosage rate; Thalassiosira, pseudonana; diatoms; photosynthesis, inhibition 2832
outgoing longwave; validation of the diurnal variation produced by ERBE 2948
fluxes; surface; retrieval from satellite data 2949
radiation budget
global; irradiance, surface solar; spatiotemporal variability .. 1256
Earth; diurnal variability 1259
radiation flux
air-sea interactions; heat flux, turbulent and net; clouds; modelled relationships 1901
radiation: solar
Japan, S of; in-situ measurements 128
water column, attenuation in 1850
German Bight, data; application of Dobson and Smith's model 1902
radiation: surface
budget; remote sensing; satellite retrieval 2499
radiative-convection (More at CONVECTION ...)
radio communications (More at COMMUNICATIONS ...)
radio tagging (More at BIOTELEMETRY, TAGGING ...)
radio waves (More at COMMUNICATIONS, WAVES ...)
radioactive dating (More at DATING ...)
radioactive elements (More at ELEMENTS ...)
radioactive materials (See also fallout, fission products, nuclear waste ...)
radioactive waste (See also nuclear waste; more at WASTE ...)
radioactivity
natural, in environmental samples; Aegean Sea, Milos island . 1318
in coastal waters; Bo Hai Sea; Yellow Sea 1322
and inorganic properties; particulates; workshop report 2985
radiocarbon (More at CARBON ...)
radiocarbon dating (More at DATING ...)
radiogenic heat
production model; crust; mantle, upper 1471
Radiolaria
Quaternary, Late; Pacific, W and central equatorial; biogeography and paleoecology 2103
distribution; North Atlantic; sediments, surface layer 2298
radiolarites (More at SEDIMENTS ...)
radiometry
AVHRR and airborne passive microwave; satellites, Landsat imagery; sea ice; parameters compared 2924
radiometry: satellite
microwave; Europe, developments 1978-88 1064
radionuclide<s> (More at ELEMENTS ...)
radionuclides
Th-230; sediments; fast and sensitive ICP-MS assay 196
as rate trackers; Susquehanna River, Conowingo Reservoir; sediments, accumulation rates 271
seasonal variation; Sweden, Oresund; Fucus, vesiculosus ... 1029
seawater; Ce-138/Ce-142 and Nd-143/Nd-144 ratios 1321
natural, as tracers; Okinawa Trough; sediment transport, lateral 1332
Polychaeta; Nereis, diversicolor; sediments, contaminated; plutonium, and americium; bioaccumulation 1701
fluctuating concentrations in seawater; mussels; ruthenium, -106 concentration dynamics 1704
Pu-239, -240, and Cs-137; Japan, Ibaraki and Aomori coasts; biota, marine 1960
P-32, Be-7; Southern California Bight; mixing, vertical; cosmogenic tracers 2480
Mid-Atlantic Ridge; hydrothermal scavenging 2565
blanks; particulates, digestion 3003
Rn-222, transport; Polychaeta, sedentary; sediment communities; advection-diffusion model 3049
radionuclides: cosmogenic
beryllium, -10, global cycle 779
radiothermal sounding (More at sounding ...)
radium
-226; sediments; seawater; fish, mechanism of transfer to .. 1320
-226 flux; Pacific; barium, flux; importance of boundary processes 3034
radon
in bottom waters; North Pacific, NE; Juan de Fuca Rift, zone; hydrothermalism 305
North Atlantic, W; sulfides; atmosphere; seawater 1936
rain (More at precipitation ...)
rainfall
late autumn; Pacific, W equatorial; in Chinese, English abstract 155
precipitation, oceanic; estimating the diurnal cycle from SSM/I data 1289
meiyu; China; Chang Jiang River, region; surface heat flux, Kuroshio, influence of 2509
subsequent; India, over; monsoons, onset; relationship 2539
rainfall: monsoon
summer; India; water masses, Pacific Ocean Warm Pool, position; relationship 1274
Indian; surface temperature; Southern Oscillation, and 500 mb ridge position in April; relationships 1281
India; monsoon circulation; secular variations in relationships 1932
random walks
manifestation of; global warming 131
Rappahannock River
Virginia; hypoxic water 201
rare earths (More at ELEMENTS ...)
rectilinear partition coefficient function; Solomon Islands, New Georgia group; basalts, rock formation 389
Japan: Sea of; sediments; cerium, diagenetic behavior ... 1398
paleoceanographic implications; Pacific, central; ferromanganese crusts, REE variability 3140
Rayleigh waves (More at WAVES ...)
reactivity: surface
particulates; sampling, characterization 2996
recruitment
community; sessile invertebrates; larval settlement, and survival 976
variability; exploited populations, marine, dynamics 1098
natality; survival, rate; growth, rate; relationships 2205
of epifaunal invertebrates; Scotland, St. Andrews coast; Gibbula, cineraria; Nucella, lapillus; Asterias, rubens; epifauna, developing assemblages; grazers, effects of ... 3172

recruitment: faunal
Copepoda; seagrasses; field test 479
recruitment: fish
North Sea; petrochemical plants, around 1039
recruitment: larval
coral communities; geographically specific recruitment and postsettlement mortality 983
abundance, settlement, juvenile mortality; Didemnum, candidum; effects on depth distribution of this colonial ascidian . 1670
and settlement; Cirripedia, population structure; influence of larval supply 2286
Red Sea
Jubal Strait region; reef sediments 294
and Afar area; volcanism; rifting; topographic and volcanic asymmetry; discussion 353
Elat: Gulf of; Foraminifera, tiny, shallow-water; taxonomic notes 527
hot brines; report 1117
laminar micrite crusts; reefs, foreslope processes 1374
early rifting; Saudi Arabia; magmatism; rifting 1551
Aqaba: Gulf of; Amphipoda; Gammaridea, 7 families; corals, rubble, from 1682
Mediterranean Sea; Suez Canal, as conduit; Lessepsian migration; biogeography, continuous process 2667
coral reefs; quantitative survey of damaged corals 2869
S, Late Oligocene; Oligocene; Aden: Gulf of, Mid-Oligocene; rifting 3088
opening; Miocene; magmatism; rifting 3098
Aden: Gulf of; plankton, all sizes, standing stock and metabolism; in German, English abstract 3160
coral reefs; ship groundings 3207
Red Sea Rift
rifting; peridotites, Zabargad; evidence for multistage metasomatism 405
East African Rift, System, Afro-Arabian Rift; Dead Sea Rift; Aden: Gulf of; continental rifts; overview 3086
red tides (More at PLANKTON ...)
during; Adriatic Sea; bacterioplankton, distribution 2747
expatriate; Gulf Stream, filaments, carried on; Dinoflagellata; Gymnodinium, breve; phytoplankton blooms 2834
redox chemistry
sediments; manganese, MnO_2/Mn^{2+} as potential governing system 1572
redox interface
hydrochemical structure; Black Sea 1963
reef<s> (See also atolls; more at COASTS ...)
reef communities
guilds, reef-building, checklist for membership; new approach to community studies 970
nutrients, particulate organic, biologically imported; detritus; food webs, importance in 1340
reef ecosystems
Hawaii; student research, projects; 12 papers 1047
reef sediments
Red Sea, Jubal Strait region 294
Holocene, emergent limestone; Mariana Islands; North Pacific, W; facies development model 820
reefs
foreslope processes; Red Sea; laminar micrite crusts 1374
reefs: artificial
emerging science and technology 1075
and structures; fish, attraction; role of depth and interstice size 2368
reefs: coral
microzooplankton, standing stock 435
rocky; Australia; New South Wales; humans, as predators, impact 598
Great Barrier Reef; numerical models, self-seeding effects shown in 968
Mexico, Cozumel; Porifera; fish; hurricanes, Gilbert, effects 971
Australia; Great Barrier Reef; pollution; opinions; 4 papers 1095
histories; stable isotope analysis; biota, giant clams, corals, calcareous algae as recorders 1372
role; global productivity, ocean 1634
ecosystems; Vietnam, off; productivity; metabolism 1645
paleoclimate, and climate change; as recorders of environmental changes 1745
Barbados; demersal zooplankton; plankter patchiness and composition 2217
Bahamas, central; Scleractinia; Milleporina; community similarity and area coverage 2710
Caribbean Sea; oral reefs; diseases, Black Band Disease .. 2784
Red Sea; quantitative survey of damaged corals 2869
calcification; photosynthesis; alkalinity, anomaly technique 3166
Red Sea; ship groundings 3207
reefs: submerged
relict; Holocene, Early; Atlantic, W 2592
reference materials: geochemical
program progress to date 2969
evaluation procedures 2972
reference materials: standard
analytical chemistry; materials and methods 2973
reflectance
measurements, effects on; suspended matter; particles, size, concentration 1335
model; chlorophyll, -a, quantifying; in the presence of degradation products 2672
reflection profiling (More at PROFILING ...)
refraction seismology (More at SEISMOLOGY ...)
refuges (More at ECOLOGY, HABITATS ...)
registry: vessel
foreign-flag; Cetacea; tuna fisheries, commercial seiners; porpoises, dolphins, protection; are regulations increasing foreign-flag registration? 2366
regolith (More at SEDIMENTS ...)
regression<s> (More at SEA LEVEL ...)
Reid: Joseph L.
history of oceanography; tribute 1110
relief (More at FLOOR ...)
remanent magnetism (More at MAGNETISM ...)
remanent magnetization
thermo-; lithosphere; geomagnetic field, marine anomalies, source implications 332
remote sensing (See also IMAGERY, spectrometers, altimeters, satellites ...)
measurements, influences on; clouds, cirrus; surface temperature 153
sea level; satellites, to study oceans; report 620
passive, advances in; U.S. report to IUGG 633
flow, ocean; acoustics, scintillations, spatial filtering of; observations 709
satellites, Seasat; anniversary collection; 13 papers 731
basin-scale estimates; North Atlantic; primary production 946
high-resolution, optical and acoustic; underwater exploration; instrumentation, imaging systems reviewed 1062
dynamic topography; satellites, the TOPEX/POSEIDON mission; report 1070
satellites, Seasat-A project; retrospective 1071
instrumentation, surface and water column; oceanographic research; current and future observing systems 1072
radar imagery; focusing SAR images with long integration times 1125
imagery; waves; radar, SAR, focusing 1174
satellite images; ice floes, identifying 1199
SAR, discrimination using texture statistics; sea ice 1200
concurrent from submarine and aircraft; Arctic Ocean; sea ice 1211
AVHRR observations; sunglint; surface 1213
water quality; eigenvector analysis 1306
and in-situ; upper ocean; sampling; concurrent high-resolution physical and bio-optical measurements and their applications 1714
geographic information systems; integration 1716
from above and below; transoceanic cables; value of retired cables to research 1721
surface temperature; variability consequences for validation and application of measurements 1762
data; Kuroshio, Extension; currents, mean flow and variability 1809
evidence from; vorticity, synoptic vortices; satellite imagery 1882
airborne thematic mapper; U.K., S Gower coastline; Bristol Channel; chlorophyll, -a, mapping 2213
CZCS data; chlorophyll, estimation; efficient algorithm 2223
fractal surface, roughness; signal processing 2390
satellite radar; variance of the normalized radar cross section . 2392
polar satellite AVHRR data, from; surface temperature 2397
multifrequency polarimetric SAR observations; sea ice 2457
atmospheric monitoring; air temperature; microwave temperature sounders compared 2492
clouds, motions, from; wind, operational production 2494
tropospheric temperature; atmospheric monitoring; precision monitoring 1979-90 2497

radiation, global budget; estimation from satellite observations 2498
surface radiation, budget; satellite retrieval 2499
satellite; climate data; derivation of long-term sets 2501
operational satellite data; climate, studies; clouds; radiation 2505
ISCCP-B3 data; cloudiness, model-generated 2533
Meteosat; clouds, motion; wind, derived from 2535
NOAA/NESDIS; atmospheric aerosols; clouds 2536
NOAA/HIRS; cirrus clouds, climatology 2537
satellites, NOAA observing systems; status and plans 2852
satellites, operational; climate, monitoring; proceedings 2853
satellites, Earth observing system of NASDA; mission objectives 2854
Geosat radar altimetry; North Atlantic; dynamic topography; FASINEX data 2900
operational; sea ice 2925
scatterometer, altimeter; wind, measurements; buoy, ship and island data; accuracy 2963
Arctic area, environments; polar seas; environmental monitoring; resource management; symposium papers 3227
Alaska; polar seas; ice 3237
Norway; surface temperature; aquaculture, planning, for 3252

remote sensing: microwave
and telemetry; spaceborne radar; planetary research; Magellan (Venus) and various earth observing systems; 8 papers 1057

remotely operated vehicles
submarine; undersea technology; robotics; applications 1078

replenishment: beach
CZM; shoreline dynamics; discussion 257

reproduction
patterns; Mollusca, 5 spp.; Pecten, maximus, and others; growth, postlarval 477
cycles; Pinnipedia; environmental and physiological factors controlling reproduction 957
Pacific, E; Pocilloporidae; corals, reef-building 994
sexual vs asexual and density of neighbors; Didemnum, moseleyi; colonial invertebrates 997

reproductive biology
adaptations; biota, marine 3262

research
U.K.; Great Britain; science; commentary 1740

research: atmospheric
oceanography; instrumentation, and observational systems; national facilities and needs 1720

research: environmental
statistical design, framework for enhancing 1051

research institutions
linking; online databases; Internet, sharing data over 1718

research: marine
Arctic area, Soviet 2880

research: ocean
potential for use in; centrifuge modelling 576

research: oceanographic
remote sensing; instrumentation, surface and water column; current and future observing systems 1072
cooperation in; U.S.; U.S.S.R.; special issue; educational 1741

Research on Antarctic Coastal Ecosystem Rates
project objectives and results; Antarctica; Bransfield Strait 1722

research: ornithological
Southern Ocean; Prince Edward Islands; seabirds; review 2719

research: planetary
spaceborne radar; microwave remote sensing, and telemetry; Magellan (Venus) and various earth observing systems; 8 papers 1057

research: student
projects; Hawaii; reef ecosystems; 12 papers 1047

residues: chemical
North Atlantic, U.S. coast; Cetacea, bottlenose dolphins 1040

resource management (See also demand analysis, evaluation research; more at GOVERNMENT ...)
Arctic area, environments; remote sensing; polar seas; environmental monitoring; symposium papers 3227

resources: deep-sea
seafloor, use and misuse; waste disposal; international law 2364

resources: fisheries
common-property; economics, theory; reprinted classic of theoretical biology 597
World Ocean; fisheries management; ownership and productivity issues 1100

resources: mineral
South Pacific; hydrothermalism; sedimentary basins; geology, geophysics 3144

resources: water
Massachusetts; Cape Cod; pollution; problems reaching crisis proportions 619

respiration
and cardiac activity; locomotion; biota, simultaneous physiological and behavioral monitoring using non-invasive technique 914
plankton communities; chlorophyll, concentration; relationship 1596
dark; Antarctica; macroalgae, endemic; photosynthesis; carbon fixation, light-independent 2306
dark; Scleractinia; primary production; corals, in; flow effects 2790

respiration: anaerobic
eutrophication, gradients; carbon sedimentation; seasonal patterns 475

Reussellidae
generic revision; Foraminiferida 2301

Revelle: Roger
history of oceanography; tribute 2376

reverberations: sound
acoustics; long-range, from the surface 1851

revetments (More at STRUCTURES ...)

Reykjanes Peninsula
Iceland; magma, primary, petrology; rift tholeiites 2143

rhegmatism (More at TECTONICS ...)

rheology: mantle
Pleistocene, Late; Holocene; Japan; sea level, changes; tectonics, implications for 864

Rhizopoda
North Atlantic, NE; Xenophyophoria, 7 taxa; abyssal communities, sediment 1015

Rhodalia
miranda; South Atlantic, W; Coelenterata, distribution; Siphonophora; ecological, oceanographic implications 2792

Rhode Island
Narragansett Beach; Narrow River, post-glacial history, plankton, pollution, flows, restoration; coastal zone, river inlet as natural laboratory for science and management; 7 papers 1113

rhodoliths
deep-water, distribution, productivity and growth history; coralline algae; carbonate nodules 1689

Rhone Delta
Mediterranean Sea, W; pollution; hydrocarbons 804

rhyolites
Icelandic; basalts, Hawaiian; magma melts, difference between 3103

rhythmites: tidal
clastic; sediments; key to history of Earth rotation and lunar orbit 1407

ribonucleic acid (Use RNA)

ribulose-1,5-biphosphate carboxylase (Use RUBPCase)

ridge<s> (More at LITHOSPHERE ...)

ridge and runnel topography (More at SEDIMENTARY STRUCTURE ...)

ridges
intersecting coasts, over; stratified flow 1887
crests; spreading centers, Antarctic-Phoenix; trenches; subduction zones; effects of interactions 2628
Taiwan, SE, off; collision tectonics; troughs 3087

ridges: aseismic
seafloor; model of structure, formation 2172
85°E, origin; Indian Ocean, Rajmahal Traps origin; Crozet Islands, hotspot; hotspots, traces; reconstruction 2630
Indian Ocean; Chagos-Laccadive Ridge, origin and compensation; gravity field, and bathymetry 2638

ridges: mid-ocean
flank roughness; seafloor spreading, rate; inverse square-root dependence 364
mantle plumes; interactions, fluxes and temperatures 415
dynamics; U.S. report to IUGG 871
hydrothermalism; magmatism; processes; U.S. report to IUGG 892
crust, discontinuities, segments and giant cracks 895
influences of; chlorophyll; productivity; effects on large-scale patterns 954
East Pacific Rise; hydrothermal vents, distribution; tectonics, and magmatism, relation to 1410

hydrothermal circulation; 3-D simulation 1414
hydrothermal circulation; silica, behavior; coupled fluid flow and reaction 1416
mantle, sources, the Hf-isotope connection; islands; volcanic arcs 1548
East Pacific Rise, 9-10°N; magmatism, active eruption ... 2633
rocks, 'popping'; vesicles, contents; implications for degassing, discussion 3101
beneath; magma melts, calculating compositions 3107
beneath; basalts, MORB melts; mantle, residual; in-situ densities, buoyancy forces 3124
spreading centers, beneath; mantle, melt extraction 3127
Mexico, off Acapulco; submarine volcanism; benthic fauna seared by eruptions; report 3261

ridges: propagating
at; transform faults, zone migration; implications of bookshelf faulting 2138

ridges: sand
China; Huanghai Sea, shelf, formation and evolution on; in Chinese, English abstract 3048

ridges: spreading
tectonic fabric; Bullard Fracture Zone; South Atlantic; seafloor 1364
slow-, mechanics; Quaternary; Djibouti; Asal Rift; crustal deformation 3093

rift<s> (More at LITHOSPHERE ...)

rift tholeiites
Reykjanes Peninsula; Iceland; magma, primary, petrology 2143

rifting
Red Sea, and Afar area; volcanism; topographic and volcanic asymmetry; discussion 353
abortive; Saudi Arabia, Aznam Trough; basalts, high-Ti tholeiites; tectonics, early stages of Red Sea opening 359
Red Sea Rift; peridotites, Zabargad; evidence for multistage metasomatism 405
Norwegian Sea; Greenland Sea; seafloor spreading, asymmetric; tectonics 860
Iapetan, during; volcanism, progressive changes in; comparisons with East African/Red Sea rift system 1480
Atlantic, central, early opening; magmatism, tholeiitic, Ar-dating and geochemistry 1550
Saudi Arabia; Red Sea, early rifting; magmatism 1551
Neogene, to Quaternary; Mediterranean area; Corinth Basin, Greece; sedimentation; basins, uplift 2606
lithospheric breakup; plates, work-hardening plastic, necking; tectonics 2627
Oligocene; Aden; Gulf of, Mid-Oligocene; Red Sea, S, Late Oligocene 3088
propagation history, constraints on; Juan de Fuca Ridge; Cobb Offset; tectonics 3092
and rift systems, global; tectonics; spreading centers; structural forms and processes, symposium papers 3094
active mechanism; Japan; East African Rift; continents, breakup; backarc spreading 3097
Miocene; Red Sea, opening; magmatism 3098

rifts
evolution; Afar, depression; Djibouti Republic; mantle, sources, changes in; volcanism 2656

rifts: continental
Baikal Rift; crust, deep structure investigations; seismic explorations 894
East African Rift, System; seismicity, recent, implications . 2163
Kenya; East African Rift, System; lithosphere, structure, large-scale variation 2647
Africa, East; East African Rift, System; crust, beneath; asthenosphere, intrusions 2888
East African Rift, System, Afro-Arabian Rift; Dead Sea Rift; Aden; Gulf of; Red Sea Rift; overview 3086
Dead Sea Rift; spreading centers 3096

rifts: propagating
Eocene; South Pacific, W, and Nazca Plate; tectonics 2625

Riga: Gulf of
Baltic Sea; sediments; nature of dislocations of the sedimentary cover 1405

rigs (More at STRUCTURES ...)

rings (More at CURRENTS ...)
warm-core; Mexico; Gulf of, W slope; eddies; interactions . 22
warm-core, U.S. contributions to studies; report to IUGG 657
Gulf Stream; Blake Plateau, over; currents; coalescence event 2412

rings: vortex
linking; topological fluid dynamics 1889

ripples (More at SEDIMENTARY STRUCTURES ...)
instabilities; waves; resonant quartets of the Benjamin-Feir type 695
excitation; gravity capillary waves, steep; numerical simulations 1190

risk assessment
developing a strategy; Chesapeake Bay 1090

risk modelling
oil spills 592

river discharges
Amazon Delta, outflow; shelf sediments 2
Amazon River; geochemical process occurring at the river-ocean boundary 218
influence; Arabian Sea, cores; Indus River; calcium carbonate, content; sediments 2088
Mississippi River, Delta outflow region; trace metals 2583

river flow
tides; interactions discussed 45

river plumes
nutrient-rich; Mississippi River; Copepoda, nauplii, associated 2675

river runoff
China; Huanghai River, and Estuary; mercury, effects on occurrence, transportation and speciation 1353

robotics
undersea technology; remotely operated vehicles, submarine; applications 1078

Rockall Bank
North Atlantic, NE; basement rocks; geochemical and isotopic constraints on rock nature and age 293

rocks
'popping'; mid-ocean ridges; vesicles, contents; implications for degassing, discussion 3101

rocks: basement
North Atlantic, NE; Rockall Bank; geochemical and isotopic constraints on rock nature and age 293

rocks: igneous
islands, oceanic; petrology 393
magma; toward a comprehensive classification 876
IUGS systematics 1500

rocks: volcanic
Okinawa Trough; North Pacific, NW; petrology, geochemistry 384
Sulawesi, NE; Quaternary; lava, geochemistry; magma, source chemistry 392
marc-; sediments; Th, Pb, and Sr isotope variations 411
seafloor; principle of geochemical mapping 1510
backarc basins; crust, structure inferences 2145
compositions; Canary Islands; North Atlantic; mantle, shallow, enriched 3117

rocky shores
Gastropoda; algal colonization; grazing, impacts 972
ecology; China, Qingdao 979
benthic fauna; humans, trampling effects 2342

roll cell convection (More at CONVECTION ...)

Romanche Fracture Zone
Atlantic, equatorial; transform faults; bathymetry 891
Atlantic, Bremerhaven, Germany to Puerto Madryn, Argentina; sonar, systems testing; in German, English abstract . 3232

Ronne Ice Shelf
beneath; Antarctica; circulation 2404

rope (See also CABLES ...)

Ross Ice Shelf
dynamics; Antarctica; ice shelves 1843

Ross Sea
SW, over; cyclogenesis, mesoscale; wind, strong katabatic; relationship 760
Antarctica; chlorofluorocarbons; circulation tracers; ventilation, rapid 1136
Antarctica; sediments, geochemistry 1393

Rossby waves (More at WAVES ...)
stationary; boundary currents, extensions 1172
stratified ocean; analysis 1182
mixing, chaotic; vorticity; fluid dynamics 1248
barotropic; fluid dynamics; turbulent diffusion; applications 2942

rotation: Earth
investigations and interpretations of the fluctuations 1122

runoff
Greece, Thermaikos Gulf; Mediterranean Sea; pesticides; pollution 226

runoff: freshwater
stratification, model 115

runoff: meltwater
retention by refreezing; sea level, projected changes, implications for ... 2932
runoff: river
China; Huanghai River, and Estuary; mercury, effects on occurrence, transportation and speciation ... 1353
run-up
groundwater, table, responses; waves ... 254
long waves; international workshop, report ... 692
beaches; waves ... 1185
breaking waves ... 1826
Rurutu Island
and Sasha seamount; Pacific; basalts, Pb isotope composition explained by sample contamination ... 3104
Russia (Use U.S.S.R.)
Russia
Lake Baikal; hydrothermal vents; lithospheric heat flow 3060
Russian River
off; California; shelf sediments ... 1389
ruthenium
-106 concentration dynamics; radionuclides, fluctuating concentrations in seawater; mussels ... 1704
Ryukyu Arc
Pleistocene, Mid-; North Pacific, NW; corals, ESR ages .. 315
and Trench, beneath; seafloor; electrical conductivity; subduction, relation to; crust ... 1552
Ryukyu Trench
slope; Quaternary, Late; North Pacific, W; sediments; paleoceanography, record ... 2611
Ryukyu-Kyushu Arc
North Pacific, NW; earthquakes; plate boundaries, thermomechanical state; arc tectonics ... 3119

Saduria
entomon (Crustacea); Baltic Sea; Pomatoschistus, minutus (Pisces); benthic communities, macro-, meiofauna; predation, by fish, crustaceans ... 966
Sagitta
friderici; South Africa, W, off; Chaetognatha; diel migration, feeding patterns ... 2230
Saguenay Fjord
Quebec; primary production, winter ... 924
Sahara Desert
as origin; Atlantic, trans-; eolian dust; observations, analysis of a Saharan dust outbreak ... 771
Saint John River
Canada; tidal hydraulics ... 42
Saint Lawrence Estuary
Canada; metals, dissolved and particulate, distributions 1343
Fundy: Bay of; Amphipoda; shelf communities, suprabenthic; subcommunity structure compared ... 2803
Saint Lawrence: Gulf of
seabirds, populations; bird sanctuaries; sanctuaries: bird; census 1982-88 ... 486
N; sediment transport; hydrodynamics, processes, influence of ... 2024
saline fronts
Caribbean Sea, during spring bloom; microplankton; trophic dynamics, structure ... 2211
saline outflows
Arctic Ocean, from; Norwegian Sea; Greenland Sea; Iceland Sea; water masses, deep water formation ... 2419
salinity (See also chlorinity, conductivity; more at SALT, SEAWATER ...)
North Sea, Jade region; sand flats; surface moisture; pore water; in German, English abstract ... 192
effect of; sediments, aquatic; ammonium, sorption; nutrients, implications for benthic cycling ... 210
effects; sediments, estuarine and freshwater; nitrogen, forms released; ion pairing ... 219
tolerance; Antarctica; algal metabolism, DMSP; temperature, tolerance; ecophysiological investigations; in German, English abstract ... 532
high; North Sea; circulation, possible changes; exceptionally saline inflows ... 614
Holocene; North America; climate; reconstruction of past changes using diatom-based transfer function ... 836
thermohaline staircases; temperature; density; fluxes across the interface ... 1227
horizontal gradients, effects; Florida; Apalachicola Bay ... 1317
Atlantic, 30°S to 77°N; temperature; flow, fields ... 1769
the Great Salinity Anomaly in the 1970s; Greenland Sea; Norwegian Sea; circulation; wind; numerical experiments ... 1779
anomaly; Gibraltar: Strait of; turbulent diffusion ... 1958
subsurface maximum, formation; Atlantic, tropical ... 1959
effects; gas exchange; seawater ... 2566
sea ice; chlorophyll; quantification of properties; in German, English abstract ... 2923
salinity: surface
Pleistocene, during last glacial maximum; North Atlantic .. 1424
Pacific, tropical; seasonal, interannual variations ... 2976
salinometers
CTD sensors; instrumentation, history ... 1106
salmon migration
North Pacific; Oncorhynchus, spp.; models of orientation and navigation at sea ... 458
salt (See also halite, SALINITY, sodium chloride ...)
salt diapirs
North Sea, Lulu-1 wells; velocity assessment ... 2593
salt fingers
and intrusions; thermohaline staircases; diffusive interfaces ... 2481
formation; turbulence, decay, following; lab experiments 2483
fluid dynamics; flow; currents; vorticity; lab experiments in physical oceanography; collection ... 2489
salt marsh<es> (More at MARSHES ...)
salt marshes
intertidal zone; Brachyura; Callinectes, sapidus, by ... 2806
salt structures (More at LITHOSPHERE ...)
salt water
experiments in; sea ice, simulated; NMR imaging ... 1202
salt wedges
stationary; pycnocline; numerical 3-layer model ... 2482
Samoa
lava tube dwellers; Alpheidae, stygiophilic; Hamalpheus, acanthops n.gen., n.sp. ... 2802
Samoa Passage
into; Pacific; abyssal flow; deep circulation ... 675
sample preparation
damage report; microfossils ... 1449
the search for a reliable mounting medium; Foraminifera ... 2197
and speciation; particulates; chemical analysis ... 3014
samplers (See also grabs, nets, splitters; more at OCEANOGRAPHIC APPARATUS ...)
samplers: benthic
deep-sea; corers, box, GOMEX ... 2708
samplers: larval
traps, cylindrical tube traps ... 3146
samples: geological
and inorganic matter; analytical geochemistry; review 175
sampling (See also coring, dredging, drilling ...)
water-, new device; benthic boundary layer ... 173
optimum size unit; population densities ... 430
subsampling errors; chlorophyll, -a determinations; natural waters, samples ... 442
techniques, intercomparison; sediments; radionuclide and heavy metal analyses ... 815
irregularly spaced observations, estimating time averages; chlorophyll, CZCS observations ... 926
resampling; statistical analysis; education; attempts to reform the introductory college course; report ... 1111
improved protocols; Mussel Watch; biomonitoring ... 1706
upper ocean; remote sensing, and in-situ; concurrent high-resolution physical and bio-optical measurements and their applications ... 1714
choice of sample size; ecological data, measurements ... 2664
sediment trap method for acantharians; strontium, oceanic cycle and labile phases ... 2987
and preservation; particulates; workshop ... 3000
sampling: jittered
spectral analysis ... 2348
sampling: sediment
soft-bottom; quantitative sampling reviewed ... 233
San Diego Bay
California; tin; tributyltin; biomonitoring ... 3219

San Diego Trough
microtopography; California; Harpacticoida, mudballs built by; Tharyx, luticastellus; flow, effects 2805
San Francisco
1906; California; earthquakes; tsunamis, origin 1107
San Francisco Bay
California; trace elements; organochlorines; content in surf scooters, 1985 1042
San Juan Islands
North Pacific, NE; algae, subtidal, encrusting; distribution, thickness patterns 530
San Nicolas Basin
California, S; San Pedro Basin; basin flushing 2899
San Nicolas Island
high-energy coast; California; fossil record; coastal zone; thanatocoenoses, modern 850
San Pedro Basin
California, S, off; Santa Monica Basin; basin circulation 1127
Southern California Bight; Foraminifera, planktonic, response; upwelling, and seasonal hydrographic conditions 2362
California, S; San Nicolas Basin; basin flushing 2899
sanctuaries (See also parks ...)
sanctuaries: bird
Saint Lawrence: Gulf of; seabirds, populations; bird sanctuaries; census 1982-88 486
sand<s> (See also dunes; more at SEDIMENTS ...)
sand beaches
Iceland; intertidal meiofauna 473
sand flats
North Sea, Jade region; surface moisture; pore water; salinity; in German, English abstract 192
sand ridges
China; Huanghai Sea, shelf, formation and evolution on; in Chinese, English abstract 3048
sand waves (More at WAVES ...)
subtidal dunes; Australia, NE; Torres Strait; currents, wind-driven; dune asymmetry reversal with reversing currents 817
sandy beaches
wave-exposed; Hong Kong; fauna 986
vehicular traffic, ORVs; macrofauna, effects on 1094
sandy shores
zonation, patterns 434
Sanriku
Japan, NE, off; earthquakes, spatial distribution in 1989 ... 1542
off; Japan, NW; macrobenthic communities, deep-sea; seasonal variations 1640
Santa Barbara Basin
California; paleoceanography; sediments, laminated, reflected in carbon isotopic ratios 829
California, Borderland; trace metals, accumulation; sediments 2068
Santa Catalina Basin
bathyal; California; vertebrate carcasses, a whale skeleton; taphonomy, deep-water 846
California, borderland; sediment mixing; conservative tracer study 2041
Santa Maria Basin
California, shelf; meiobenthic communities 2711
Santa Monica Basin
California, S, off; San Pedro Basin; basin circulation ... 1127
California, off; eddy diffusivity; current shear, and strain; CTD profile results 1228
sapropels (More at SEDIMENTS ...)
formation; Mediterranean Sea; climate; review 843
Pliocene, Late; Pleistocene, Early; Mediterranean Sea; geomagnetic field, Gauss to Matuyama; astronomical calibration, implication for the polarity time scale 1429
deposition; Mediterranean Sea, E; anoxic basins; past and present deposition 2014
Bannock Basin; clay minerals; sediments, pelagic; clay origin and differentiation 2072
Mediterranean Sea, E; sediment diagenesis; barium, mobilization 2074
Pleistocene; Pliocene; Tyrrhenian Sea 2092
Sargasso Sea
isopycnal diffusivity 108
carbon monoxide; methane; seawater, distributions and consumption in 200
fluxes to; aragonite; calcite, magnesian; seawater 212
cerium, anomalies; seawater; comment 1954
North Pacific, subtropical; Anguilla, rostrata, A. japonica; eels, spawning areas; expedition reports 2385
mixed layer, depth; satellite imagery; construction and accuracy analysis of images 2417
satellite altimetry
Seasat; signal processing, and precise orbit computation 623
Seasat; circulation modelling; recent studies reviewed 642
dynamic topography; observations, Seasat 644
Seasat; dynamic topography, ocean; temporal variability, U.K. studies reviewed 649
ice sheets, mapping 701
geophysical applications; U.S. report to IUGG 816
Norwegian Sea; signal processing 1123
seamount topography; 3-D modelling 1362
gravity field, gradients 1468
seafloor mapping 2011
satellite data
SMMR; surface temperature 2391
precipitation, estimation 2542
Image Library and Browse System 2857
center, role; climate, and circulation, studies 2858
accessibility at the National Climatic Data Center 2859
on-line inventory of NCDC's polar orbiter 2860
satellite geodesy
tides, harmonic solutions 1169
climate, studies, impact on; global change 2346
satellite imagery (More at IMAGERY ...)
air-sea interactions; ice-ocean interactions, and air-; atmosphere, conditions; legacy of the Seasat mission 140
GMS data; nephanalysis 152
vorticity, synoptic vortices; remote sensing, evidence from . 1882
clouds, global 1929
Sargasso Sea; mixed layer, depth; construction and accuracy analysis of images 2417
DMSP-SSM/I; cryosphere, data; status, research applications 2864
sea ice; DMSP special sensor microwave imager; NASA validation program 2920
sea ice; DMSP special sensor microwave imager 2921
sea ice; DMSP retrieval algorithm, comparison with Landsat imagery 2934
satellite positioning
Global Positioning System, introduction to; geological applications 1081
satellite radar
scatterometry; wind, velocity measurements; overview of the NSCAT system 1058
remote sensing; variance of the normalized radar cross section 2392
satellite radiometry
microwave; Europe, developments 1978-88 1064
satellite scatterometry
wind, speed, measurements 752
wind, vector algorithm 1923
satellites
from; continent-ocean boundaries; magnetic field, anomalies 336
to study oceans; sea level; remote sensing; report 620
Seasat observations; waves; radar altimetry 693
Seasat; ice sheets; glaciology, contributions to 700
Seasat; remote sensing; anniversary collection; 13 papers ... 731
ERS-1; microwave instrumentation 1049
and Space Shuttle; radar, SIR-C/X synthetic aperture radar system; imaging systems 1055
the TOPEX/POSEIDON mission; dynamic topography; remote sensing; report 1070
Seasat-A project; remote sensing; retrospective 1071
global positioning; U.S. report to IUGG 1080
U.S. GPS; positioning data; discontent over restrictions on data 1104
geosynchronous; wind field, derivation, improving 2529
NOAA observing systems; remote sensing; status and plans . 2852
operational; remote sensing; climate, monitoring; proceedings 2853
Earth observing system of NASDA; remote sensing; mission objectives 2854
operational environmental; atmospheric temperature; climatic databases, ATMOES 2861
polar orbiting; meteorological data; NESDIS operational sounding products 2865
Landsat imagery; radiometry, AVHRR and airborne passive microwave; sea ice; parameters compared 2924
Geosat; altimeter data; improvements 3226

satellites: meteorological
Europe, systems ... 2493
China, program ... 2495
saturation diving (More at DIVING ...)
Saudi Arabia
Aznam Trough; basalts, high-Ti tholeiites; rifting, abortive; tectonics, early stages of Red Sea opening ... 359
Red Sea, early rifting; magmatism; rifting ... 1551
coast; Arabian Gulf; Foraminifera, recent benthic ... 2302
Scandinavia
Iceland; Mollusca, new and little known ... 998
Iceland; lithosphere, imaging and understanding; crust; mantle; symposium ... 1513
Skagerrak; tectonics; basin subsidence ... 1546
coastal waters; Chrysochromulina, polylepis, unusual bloom in 1988; phytoplankton blooms; environmental conditions and ecophysiological mechanisms behind bloom ... 1601
Scandinavian Ice Sheet
Pleistocene, Valday time; Barents Sea, shelf; ice sheets, maximum advance ... 1423
scanning electron microscopes, microscopy (Use SEM)
scarps: platform
elevation; shores; wave height, and rock strength, influence; laboratory approach to the problem ... 3047
scattering: acoustic
bubble plumes ... 93
bubbles, clouds, from ... 100
directional modal scattering by a ridge ... 710
surface, from; spatial covariance and adaptive beamforming ... 1220
angular distributions, from flexural and Rayleigh resonances ... 2465
from cylindrical elastic objects ... 2471
scattering layer<s> (More at LAYERS, OCEAN, SOUND ...)
scattering: light
multiple; water column; angular distribution of the submarine light field ... 81
techniques; particle size analysis; applications, review ... 166
sunlight; seawater; bubbles, clouds; colors observed ... 703
scattering: radar
waves; wavelet analysis ... 684
scattering: sound
acoustics; parametric sonar investigations ... 105
acoustics; current jets, particle-laden, from ... 1863
acoustic waveguides; boundary integral equation methods ... 2463
acoustic waveguides; Rayleigh-Fourier and extinction theorem methods compared ... 2468
scattering: wave
surface roughness ... 1192
scatterometry
technique for measurement; waves, spectra ... 63
scatterometry: satellite
wind, speed, measurements ... 752
wind, vector algorithm ... 1923
schools: fish
formation and maintenance; a random encounter model ... 2204
science (See also the various scientific disciplines; more at ACADEMICS, RESEARCH ...)
biodiversity, studies; policy; extinctionates increasing as a result of human activity ... 1121
peer review, criticized; publishing ... 1739
U.K.; Great Britain; research; commentary ... 1740
women, in science, 11 profiled ... 2371
recruiting nontraditional players; women; minorities; handicapped, physically disabled ... 3254
science: computer
frontiers ... 2349
science: earth
multivariate analysis, permutation methods; application based on distance functions ... 237
science: environmental
statistical analysis, methods; conference; 20 papers ... 1052
mathematical modelling, role; an idiosyncratic assessment ... 2345
science: history of
community ecology; the past century, perspective ... 1103
Kolmogorov: A. N.; personal reminiscence ... 2882
Kolmogorov: A. N.; reminiscences ... 2883
science: measurement
oceanography; meteorology; review of education in observational techniques; national facilities ... 610
science publishing
peer review; due for an overhaul ... 601
science teaching
education; a holistic approach ... 1744
Scientific Committee on Problems of the Environment (Use SCOPE)
Scientific Committee on Ocean Research (Use SCOR)
scientific data
South Pacific, a decade of research; the marine geoscience data base ... 3231
scientific journals
libraries; serials, financial control of; problem of increasing costs; French and English ... 605
publishing; libraries; increasing numbers, increasing costs; French and English ... 606
publishing; Continental Shelf Research; review ... 2373
scientific terminology
planktic et al. vs planktonic et al. ... 2881
scientists
dilemma; climate change, greenhouse-induced; policy, advice ... 603
Scina
4 n.spp.; North Pacific, W; Amphipoda, hyperiid; Physosomata ... 2297
Scleractinia
Indo-Pacific; Fungiidae; corals, mushroom; taxonomy, phylogeny, biogeography ... 503
Goniastrea spp., Platygyra; Great Barrier Reef; corals, comparative demography; age- and size-dependent classifications ... 993
Montastrea, annularis; effects on banding, isotopic composition; coral bleaching ... 995
Caribbean Sea; Montastrea, annularis; corals; carbon, and oxygen isotope time series ... 1379
Java Sea; Fungiidae; coral bleaching; stress, tolerance, and interference by life history strategy ... 1639
Echinodermata; Acanthaster, planci, outbreaks; are they novel events?; coral communities; predation, massive ... 2241
Bahamas, central; Milleporina; coral reefs; community similarity and area coverage ... 2710
coral growth, hermatypic, forms; application of tree architecture models ... 2783
primary production; respiration, dark; corals, in; flow effects ... 2790
distribution; South China Sea, islands, sublittoral zone; light, dependence ... 2794
associated with; Great Barrier Reef; Copepoda; Lichomolgidae, key to the genera ... 2811
sclerochronology (More at GEOCHRONOLOGY ...)
Scolecobasidium
sp.; Bengal; Bay of; Andaman Islands; corals, massive, necrotic patches; fungi, invasion by ... 2850
Scotia Sea
Weddell Sea; biogenic silica, production ... 3201
Scotia-Weddell Confluence
Antarctica; nitrogen, inorganic, stocks and uptake flux variability ... 2681
Scotland
St. Andrews coast; Gibbula, cineraria; Nucella, lapillus; Asterias, rubens; epifauna, developing assemblages; grazers, effects of; recruitment, of epifaunal invertebrates 3172
lochs; Gastropoda; Nucella, lapillus; tin; tributyltin, mariculture-related ... 3202
oil ports; Gastropoda; Nucella, lapillus; tin; tributyltin, impacts from large vessels ... 3205
Scott spectra (More at WAVE DYNAMICS ...)
scours: ice
and grounding; seabed, disturbance; icebergs ... 2042
massive, following; Fucus, canopy; community succession; Mytilus ... 3168
Scylla
serrata, effects on behavior; Decapoda; toxicities, acute; pesticides, 3 ... 1707
Scyphomedusae
including 2 Lessepsian migrants; Mediterranean Sea, E; Israel, coast ... 3180
Scyphozoa
Atlantic, W; Hydrozoa; medusae ... 2787
sea breeze<s> (More at BREEZES ...)
sea breeze fronts
breezes, land, sea; gravity currents, atmospheric; inland penetration, Kelvin-Helmholtz billows ... 754
sea breezes
land, masses, width of; relationship ... 1287
developing circulation; pollutant deposition, dry, modification ... 1948

features; Spain; Barcelona 2964
sea cliffs
retreat; California, S, coastal area; sediment failures, mass movements 818
sea ice (More at ICE ...)
Arctic Ocean; Antarctica, ocean around 79
variations; Antarctica, around; air temperature, seasonal; relationships 748
cover; Weddell Sea, off Kapp Norvegica; particle sedimentation, short-term variability; plankton, biomass, feeding activity; water masses, advection; relationships . 788
beneath; Antarctica, waters around; micronekton; macrozooplankton; community structure 961
remote sensing, SAR, discrimination using texture statistics .. 1200
simulated; salt water, experiments in; NMR imaging 1202
radiation; radiative transfer model with vertical structure variations 1203
draft profile; fractals, fractal nature 1204
snow, cover; climate, competing effects in shaping 1205
microstructure; statistical description 1207
weather forecasting, ice forecasting; development of coupled model 1208
nearshore, movements; Alaska, Barrow, near; seabed, ice gouges; correlation 1209
Arctic Ocean; remote sensing, concurrent from submarine and aircraft 1211
from; Arctic Ocean; acoustics, reflections 1219
albedo, parameterization; climate modelling 1267
porosity; chlorophyll, content; relationships 1845
ridging; Weddell Sea, E 1848
Antarctica; sedimentary facies, associated 2045
Antarctica, waters around; epontic communities, structure; productivity 2214
melting; phytoplankton, released, aggregations of; microalgae 2224
remote sensing, multifrequency polarimetric SAR observations 2457
Hudson Bay; upper ocean; variation of upper layer dynamics during seasonal breakup 2460
Weddell Sea; diatoms, distribution; chlorophyll 2674
Arctic area; satellite detection during cloudy conditions 2918
Arctic area; Lancaster Sound; climate, measurement of state variables 2919
satellite imagery; DMSP special sensor microwave imager; NASA validation program 2920
satellite imagery; DMSP special sensor microwave imager ... 2921
chlorophyll; salinity; quantification of properties; in German, English abstract 2923
satellites, Landsat imagery; radiometry, AVHRR and airborne passive microwave; parameters compared 2924
remote sensing, operational 2925
thickness; Chukchi Sea; polynyas, measurements in 2926
under-ice draft profiles 2927
Antarctica, Atka Bay; energy budget, formation underwater, growth; in German, English abstract 2928
thickness determinations 2929
keel shape 2930
surface roughness, microscale, in-situ measurements 2931
satellite imagery; DMSP retrieval algorithm, comparison with Landsat imagery 2934
Bering Sea; Chukchi Sea; polynyas, location, extent 2935
sea level (See also eustasy, isostasy, regressions, tides, transgressions ...)
Baltic Sea; water masses, major inflows, volume 15
response to pressure forcing; barotropic flow 44
observing system; global monitoring 47
changes since the early 1920s; China; Shanghai 48
height determination above; Antarctica; marginal ice zone; GPS applications 80
rising; Quaternary, Late; Iceland, northern; shoreline dynamics; deltas, and spits, littoral terraces 260
rise; Mexico; Gulf of, N; tides, gauge records 1909-1988; subsidence 261
fluctuations; China, Fujian coast, past 6000 yr; in Chinese, English abstract 264
change, response to; basins, silled; sediments, organic-rich transitional facies 292
changes; Quaternary; Greece, S Evvoikos Gulf; tectonics, extensional 356
remote sensing; satellites, to study oceans; report 620
global scale surface variability; dynamic topography; circulation; altimetric and tide gauge measurements 650
changes; Pleistocene, Late; Holocene; Japan; tectonics, implications for; mantle rheology 864
China; Pearl River, Delta; estuarine circulation, responses; meteorological forcing and river inflow 1371
short-lived global fluctuations; epeirogeny; plate tectonics; relationships 1422
change; Quaternary; Mediterranean Sea; Cyprus; crust, uplift 1438
lowering, due to; Mediterranean Sea, E; pycnocline shoaling 1439
rising; climate change; atoll states, future of 1737
curve; Mexico; Yucatan Peninsula, from firepit on 1746
rise, separation of causes; crustal deformation; subduction zones; determining secular variation 1822
time variations, effects; Adriatic Sea, N; storm surges, extreme 1833
changes; Quaternary, Late; Canada, E; Nova Scotia, off; shelf sedimentation 2056
ice cover, and circulation; Pliocene; Southern Ocean; paleoclimate, evolution 2095
fluctuations; U.S., mid-Atlantic coastal plain; Pliocene, chronology 2097
change; Pliocene; Eniwetok Atoll; Pacific, tropical 2102
eustasy, changes due to; crust, stable frame of reference selection 2610
VLF variations, calculations; wind-driven flow 2910
projected changes, implications for; meltwater runoff, retention by refreezing 2932
rise; China; Yangtze River, influence on middle and lower reaches since 12,100 BP 3070
sea level pressure
El Niño, ENSO events; Southern Oscillation; Darwin-Tahiti SOI data back to 1876, comparison with recent ENSO events 137
sea state (More at WAVES ...)
sea surface (More at LAYERS, surface, OCEAN ...)
sea surface temperature (More at SURFACE, TEMPERATURE ...)
sea turtles
hatchling loggerheads; Caretta, caretta; orientation, off dark and artificially lighted beaches 462
Kemp's ridley, evolutionary distinctiveness; endangered species 956
surveys; Angola 958
navigation, mechanisms; migration, long, oceanic 3164
sea urchins
Australia, NSW; Botany Bay; Centrostephanus, rodgersii; mass mortalities; resultant changes in subtidal habitat .. 1632
Strongylocentrotus, franciscanus; kelp communities, long-term stability; El Niño, ENSO events; relationships 2714
reduction in grazing; North Atlantic; Laminaria, longicruris, refugial role; kelp communities 2829
grazing, role; Mexico; Gulf of, N, field experiments; seagrass beds, influence on; herbivory 3173
seabed
measurements at; bottom boundary layer, processes; instrumentation 1159
ice gouges; Alaska, Barrow, near; sea ice, nearshore, movements; correlation 1209
shelf; internal waves; interactions 1839
seismic surveys, refraction; technique using bottom shots ... 2003
disturbance; icebergs; ice scours, and grounding 2042
Canada, shelves; sediments; shelf communities; symposium proceedings 2350
subbottom; acoustics, constant-Q absorption properties 2937
seabed geology
Canada, E; shelf sediments 2036
seabed minerals
potential, effects on; Solomon Islands; Pacific; fault zones, strike-slip 3131
seabirds (More at BIRDS ...)
populations; Saint Lawrence; Gulf of; bird sanctuaries; sanctuaries; bird; census 1982-88 486
breeding; Antarctica, Esperanza Bay; penguins, Adelie, depth utilization by 487
dead; California, central coast 1980-86; marine mammals; patterns of carcass deposition 1048
fish stocks, declines; relationships 1580
tuna, yellowfin, schools; sharks; porpoises; polyspecific associates 1622
Antarctica; guano, nutrient supplies; nunataks, inland, to; effects of ornithogenic products on ecosystem structure and functioning 1649

alcid, influence on marine distributions; Bering Sea, Anadyr Strait; pycnocline, topography; water column, structure 1650
great auks; trophic dynamics, stable isotope determinations . 1651
Weddell Sea, winter aggregations in; mammals, marine; pack ice 2198
blue-eyed shag; Southern Ocean; Phalacrocorax, atriceps; diving, patterns and performance 2255
cormorants; Phalacrocorax, carbo sinensis; bioindicators; PCBs 2333
Southern Ocean; Prince Edward Islands; ornithological research; review 2719
gulls, foraging; plankton, beach-stranded; New Zealand, Otago Harbor 3174

seafloor (More at FLOOR ...)
electrical conductivity; lithosphere, thermal structure investigations; ML soundings; in French, English abstract . 346
area impacted; Mid-Atlantic Bight, 106-mile site; sewage sludge, dumped 801
flattening; Pacific, W; basin subsidence; long-wavelength residual topography, interpretations 881
Mexico: Gulf of, Florida Escarpment base; crust, porous, deep in; bacteria, as producers of methane; seep communities; report 1119
endogenic relief formation; geomorphology 1363
Bullard Fracture Zone; South Atlantic; spreading ridges, tectonic fabric 1364
DSDP Hole 504B; heat flow, reduction with depth; convection, borehole fluid, evidence for? 1473
volcanic rocks; principle of geochemical mapping 1510
Ryukyu Arc, and Trench, beneath; electrical conductivity; subduction, relation to; crust 1552
structure at depth; Barents Sea; crust 1554
oxidation rates; ferromanganese nodules, composition; productivity, ocean surface; relationships 1571
relief; Arctic Ocean; bottom topography; new orographic map 2017
crust; horizontal dimensions and lateral variability of geological singularities 2161
aseismic ridges; model of structure, formation 2172
distribution on; ferromanganese nodules 2191
use and misuse; deep-sea resources; waste disposal; international law 2364
rough; acoustics, and seismic propagation 2587
Ocean Seismographic Network, site preparation; seismic surveys, future; ODP Leg 136 initial report 2862

seafloor compliance
crust, density, elasticity; observations 1517

seafloor mapping
Mediterranean Sea; digital shaded relief map 585
satellite altimetry 2011

seafloor sediments
South Pacific, W; New Caledonia, off; ichnofacies, and recent organism traces 1447

seafloor spreading (More at SPREADING ...)
Komandorskiy Basin; Shirshov Ridge; crust, structure .. 355
rate; mid-ocean ridges, flank roughness; inverse square-root dependence 364
asymmetric; Norwegian Sea; Greenland Sea; rifting; tectonics 860
North Pacific, NE; Juan de Fuca Ridge, Cleft segment geology; lava, recent flows; hydrothermal plumes, mega- 873
dependence of seafloor roughness on spreading rate 1488
system evolution; Tertiary, Late; California, off, between the Mendocino and Murray fracture zones; tectonics 2132

seagrass<es> (More at FLORA ...)

seagrass beds
Arabian Sea; Lakshadweep; habitats, complexity; macroinvertebrates, abundance; coral atolls 2705
influence on; Mexico: Gulf of, N, field experiments; sea urchins, grazing, role; herbivory 3173

seagrass biomass
and productivity; Thalassia, testudinum; nutrients, water column; epiphytes, levels; relationships; field observations 1691
rapid visual evaluation technique 3198

seagrass communities
Texas; Laguna Madre, hypersaline lagoon; bacterioplankton, abundance and production dynamics 927
Harpacticoida, sediment-dwelling, impact on; epifauna, large, disturbance by; predator-prey dynamics 985

seagrass detritus
Thalassia, hemprichii, litter biodegradation; fungal biomass, significance 992

seagrasses
Copepoda; faunal recruitment; field test 479
Bivalvia, growth affected; habitats, modification; relationship 1021

seals
movements; Pinnipedia; Halichoerus, grypus; foraging, behavior; diving 461
monk; Hawaiikure Island; endangered species; new protection program 2890

seamount magnetism
a theory of ideal bodies 1467

seamount topography
satellite altimetry; 3-D modelling 1362

seamounts (More at LITHOSPHERE ...)
submarine volcanism; Japan; Izu Peninsula, off, 1989; volcanic eruptions, ejecta and eruption mechanisms ... 396
large (Fieberling Guyot); flow, over; internal waves, trapped, tide-driven 699
islands; sound, refraction; acoustics 716
Josephine Seamount; North Atlantic, Madeira-Tore Rise; crust, structure 899
multiple, in the vicinity of; currents, deflections 1164
Pacific, examples from; carbonate platforms, mid-oceanic; islands, as oceanic dipsticks 1378
India, margin; Arabian Sea; geophysical studies 1496
off-ridge; North Pacific, NE, Heck and Heckle seamounts; basalts, primitive and highly depleted MORB 1501
over; tides, rectification; model 1820
Mesozoic, accretionary complex, example; Japan; subduction; melanges, large-scale formation 3090
surrounding; South Pacific; Manihiki Plateau; volcanoes, mud or lava? 3099

seas
water bodies, emission spectra; oceans; brightness, spectral coefficients; possible applications to remote sounding 1124
land; ecological theory, and research; time to cross the boundary 3225

seas: epeiric
and oceans; Jurassic, Late; Cretaceous, Early; fossil record; nannoconids as paramount environmental recorders; in French, English abstract 1445

seas: epicontinental
Pacific, W; Indian Ocean, N; Coccolithophoridae; Recent monsoonal and fertility controls on coccolith assemblages 540

seas: marginal
Pacific, W; sediments, elements characterized; in Chinese, English abstract 3077
Mesozoic, -Cenozoic; China, SE, fault-sag zones; taphrogenesis, and dispersion 3091

seas: polar
importance in; Greenland Sea, for instance; plankton, nanno-, pico-; in German, English abstract 441
Prymnesiophyta; Phaeocystic, blooms, importance; carbon cycle 950
primary production; role of environmental controls 2696
in; enzymes, extracellular; microbial metabolites; temperature, effects 2779
water masses, High-Salinity Shelf Water formation 2907
Arctic area, environments; remote sensing; environmental monitoring; resource management; symposium papers 3227
Alaska; ice; remote sensing 3237

seas: shallow
sediment-water interface, thermal interactions at 347
with inhomogeneous bottom; sound field, average, intensity .. 1856

seas: shelf
Europe, NW; temperature, surface and bottom 4
Europe, NW; stratification 10
Europe, NW; thermocline, depths; temperature 624

seawater (More at WATER ...)
estuarine, coastal; chromium, determinations by electrothermal AAS 165
organic matter, dissolved and complexing; measurements, methods, ecotoxicology; in French, English abstract 168
silicon, micro-; oscillopolarographic determination 169
tin, inorganic, a.a.s. determinations; in Chinese, English abstract 177
trace metals; electrothermal AAS determinations 180
copper, voltammetric determination; presence of ethylenediamine 183
China, Zhejiang coast; bays, chemistry 186
deep-ocean, abundances in; trace metals; effect of surface reactions 187

phosphorus, scavenging of; arsenic, scavenging of; iron, oxyhydroxides, hydrothermal, by; inter-ocean variations .. 188
copper, complexing capacity; phytoplankton bioassay method; in Chinese, English abstract 190
copper, complexing capacity; polarographic determination; in Chinese, English abstract 191
sodium chloride; potassium chloride; activity coefficients . 193
distributions and consumption in; Sargasso Sea; carbon monoxide; methane 200
Sargasso Sea, fluxes to; aragonite; calcite, magnesian 212
China; Jiaozhou Bay; phytoplankton; mercury, concentrations, distributions; in Chinese, English abstract 231
Chaetoceros, sp, effects on; mercury pollution; nutrients, phosphorus-limited conditions; in Chinese, English abstract 569
China, Jiaozhou Bay; phytoplankton; sediments; tin, speciation; in Chinese, English abstract 596
bubbles, clouds; light scattering, sunlight; colors observed .. 703
nutrients; ICES intercomparison exercise results 784
fate in; pesticides, carbaryl, 1-naphthol, atrazine 798
waste disposal products, stabilized coal-waste block; long-term processes 803
Quaternary; sediments; organic matter; carbon, isotopic record, variations 842
major ions, role; ores, polymetallic, formation; copper, sorption by Mn-oxyhydroxides 913
Oman, coastal waters; Persian Gulf; sediments; biota, oysters; hydrocarbons, content 1083
ammonium, ion ratios for isotope dilution experiments; HPLC determinations 1305
tin, and tributyltin determinations 1310
metals, Cu, Cd, Pb, Zn; geochemical behavior in solution and suspension 1315
sediments; radium, -226; fish, mechanism of transfer to 1320
radionuclides; Ce-138/Ce-142 and Nd-143/Nd-144 ratios ... 1321
nitrogen, total dissolved and dissolved organic; vertical distribution 1329
colloidal particulates, small; occurrence 1342
Cretaceous-Tertiary boundary; strontium, isotopes 1434
in; viruses, abundance; TEM and epifluorescence measurements 1653
bacterioplankton; metals, accumulation dynamics 1665
selection of locations with deep water of optimum clarity; DUMAND, project; neutrinos, detecting 1759
North Atlantic, W; sulfides; radon; atmosphere 1936
nitrogen, colorimetric assays; microplate readers 1950
Sargasso Sea; cerium, anomalies; comment 1954
surface layer; ions, fractionation 1955
chromium, oxidation kinetics 1956
manganese, species 1957
heat of solution in; atmospheric carbon dioxide 1964
Mediterranean Sea, deltaic and lagunal environments; sediments; phenols, phenolic compounds 1966
ecosystems; nitrogen limitation; terrestrial ecosystems .. 1976
open ocean; mercury, speciation 1992
-lava interactions; lava flows, submarine 2147
surface; Gulf Stream; chlorophyll production, enhancement; nitrates, rainwater 2234
Korea, South Sea; currents; temperature, variations; in In Korean, English abstract 2403
Korea, southern sea; currents; physical processes influencing chlorophyll, nutrient distributions 2408
sound, LF absorption, investigation 2474
uranium, extraction; hydrous titanium oxide adsorbent studies 2554
determinations in; iodine, species 2557
elements, distribution patterns 2558
europium, anomaly; implications for fluvial vs hydrothermal inputs 2559
in; iron colloids, oxyhydroxides; photochemistry 2563
gas exchange; salinity, effects 2566
anoxic basins, and sediments; molybdenum, concentration; vanadium, concentration 2579
and distilled water; hexachlorocyclohexanes, Henry's Law constants; temperature, as function of 2585
amino acids; carbohydrates; chemical analysis; sample handling and analysis 2980
organic matter colloids; isolation methods 2990
particulates, in-situ exploration 2992
colloids; metals, associated; particulates; filtration, technique 3018
electrophoretic separation in; particulates; proteins 3025
India; Bombay; heavy metals, distribution; pollution; particulates 3037
tin, tributyl; chemical analysis, reliability; water quality, criteria, implications for 3042
North Atlantic; North Sea; PCBs; in German, English abstract 3043
iron; bacterial corrosion 3044
large-scale advection; Pacific, central equatorial; crust, oceanic, through 3058
Netherlands; tin, butyltins; biota, effects on 3213
seawater desalination
freshwater, production of; technologies 812
seawater optics
Antarctic Peninsula, around; bio-optical properties 1214
irradiance, measurements; absorption and scattering estimates 1257
seawater: standard
recent batch comparison 2975
seaweed<s> (More at ALGAE ...)
seaweed communities (More at COMMUNITIES ...)
seaweeds
Adriatic Sea, N; trace metals 559
littoral; photosynthesis, seasonal patterns; emersion, effects; physiology 2305
Gelidium; phycocolloids, commercial; workshop 2307
Secchi depth (More at LIGHT, OCEAN ...)
Secchi disk
visibility depth; particulates, concentration, evaluation; radiation, upward, spectra 1980
Second International BIOMASS Experiment (Use SIBEX)
secondary production (More at PRODUCTION ...)
sediment<s> (See also clay, contourites, debris, deposits, dust, laterites, mud, ooze, PARTICULATE MATTER, peat, phosphorites, porous media, radiolarites, regolith, SANDS, sapropels, soils, turbidites ...)
sediment bacteria
Ciliata, protection from feeding by 2771
sediment communities
Echinodermata, deposit feeders; Holothuria, tubulosa; microbiota; relationship 2702
Echinodermata, deposit feeders; Holothuria, tubulosa; fecal pellets, decomposition 2703
India, W, Konkan; population dynamics, and community structure; macroinvertebrates 2716
Polychaeta, sedentary; radionuclides, Rn-222, transport; advection-diffusion model 3049
sediment cores
Quaternary, Late; Indonesia, E; palynology 1441
analysis by energy-dispersion X-ray fluorescence 2060
sediment denitrification
Baltic Sea; Kiel Bight; eutrophication 2741
sediment diagenesis
North Sea, Eldfisk Field; chalks, sedimentology 2058
Mediterranean Sea, E; sapropels; barium, mobilization .. 2074
mudrocks; North Sea, Kimmeridge Clay Formation 3055
sediment facies
ichnofabric indices, and basin analysis 1444
ichnofabric indices; symposium papers 1446
sediment failures
Japan: Sea of, Korea Plateau slope 265
mass movements; California, S, coastal area; sea cliffs, retreat 818
sediment geotechnical properties
Canada, off, Flemish Pass; effects of biological processes on strength and consolidation properties 281
earthquakes, -induced settlement; clays 827
sediment liquefaction
California; Moss Landing, onshore and offshore sediments; earthquakes, during the 1989 Loma Prieta quake 1526
sediment microcosms
organic matter mineralization, aerobic and anaerobic 2257
sediment mixing
California, borderland; Santa Catalina Basin; conservative tracer study 2041
sediment porosity
British Columbia; Knight Inlet; determinations using a transient electromagnetic system 1388
sediment sampling
soft-bottom; quantitative sampling reviewed 233
sediment slurries
in; metals, Cu, Cd, Ni, Pb, Zn, Fe, Mn,; mobility under anaerobic and 20% air saturation conditions 792
sediment sound velocity (More at SOUND ...)
sediment spoils (More at SPOILS ...)
sediment thermoluminescence
reduction; Quaternary; Spitsbergen; light, intensity and spectra effects; implications for dating sequences 2002

sediment transport (More at TRANSPORT ...)
mass movements; North Atlantic, W; slope, and rise; submarine processes ... 830
lateral; Okinawa Trough; radionuclides, natural, as tracers 1332
beaches; shoreline dynamics, onshore-offshore transport .. 1370
Egypt; Nile Delta; nearshore patterns ... 2020
longshore, rate ... 2021
Saint Lawrence: Gulf of, N; hydrodynamics, processes, influence of ... 2024
suspended; suspended matter; nonequilibrium, simple model 2028
Canada, E shelf ... 2030
sediment traps
do they provide an accurate record?; particle flux ... 1336
sedimentary basins (More at BASINS ...)
Bering Sea, history; tectonics ... 866
Caribbean Sea, NE Caribbean Plate boundary zone; petroleum potential ... 909
Neogene; Greece, Megara Basin; extensional tectonics; tectono-sedimentary development ... 1418
heat flow, models; hydrocarbons, generation; basin analysis of the South Mozambique Graben ... 1565
evolution; Tertiary; Japan; Japan: Sea of, opening, in reference to ... 2096
hydrocarbon-bearing; petroleum, generation, migration; organic geochemistry; symposium papers ... 3132
U.K.; Inner Moray Firth, implications of Mesozoic-Recent development ... 3137
South Pacific; mineral resources; hydrothermalism; geology, geophysics ... 3144
sedimentary environments
change in; Cenomanian-Turonian boundary; carbonate platforms, rudist-bearing, demise ... 1376
modern; Massachusetts; Boston Harbor ... 2023
sedimentary facies
associated; Antarctica; sea ice ... 2045
sedimentary structure<s> (See also banks, cusps, ripples ...)
sedimentation (See also bed-loads, deposition ...)
coastal embayments, low-energy ... 1369
rates; Paleogene, stratigraphy; Mexico: Gulf of, NW ... 1426
Maine: Gulf of; tidewater glaciers; deposition, structural control of ... 2032
Wisconsinan, Late, to present; Newfoundland, N, off; organic matter; response to climatological events ... 2035
gravity currents; turbulent plumes, generated by ... 2039
glaciated shelves ... 2040
ice-proximal, rates; Alaska, SE; glacial fjords ... 2051
Black Sea, NW; suspended matter, at base of water column, composition and distribution ... 2059
glaciomarine; Canada; Arctic area; tidewater glaciers ... 2069
Norwegian Sea, in autumn; Pteropoda ... 2208
rate, effects on; Baltic Sea; Kiel Bight; fecal pellets; food, supply, in relation to ... 2233
Neogene, to Quaternary; Mediterranean area; Corinth Basin, Greece; rifting; basins, uplift ... 2606
Mariana Trough; North Pacific, W; in Chinese, English abstract. ... 3052
Cenozoic; Barents Sea, W; erosion ... 3076
sedimentation: algal
response to; North Sea; nannoplankton; flagellates, nanno-, benthic heterotrophic ... 967
sedimentation: basin
Antarctica; McMurdo Sound; interglacial climate, conditions; resultant facies distribution ... 2048
glacially-influenced; U.K., NW; Faroe-Shetland Channel . 2070
sedimentation: carbon
eutrophication, gradients; anaerobic respiration; seasonal patterns ... 475
sedimentation: glaciomarine
paleoclimatic significance; discussion ... 2046
paleoclimate, significance; symposium papers ... 2079
sedimentation: particle
short-term variability; Weddell Sea, off Kapp Norvegica; plankton, biomass, feeding activity; sea ice, cover; water masses, advection; relationships ... 788
sedimentation: shelf
Canada, W; Beaufort Sea ... 2033
Quaternary, Late; Canada, E; Nova Scotia, off; sea level, changes ... 2056
sedimentation: slope
Norway, 67-71 N ... 1408
sediments
shear modulus; acoustics, speed profile results; gravity wave inversion technique ... 102
and other marine particulates; aromatic hydrocarbons, PAH; chemical analysis; Shpol'skii fluorometry ... 174
trace metals; Cu, Zn, Cd, Pb determinations ... 182
South China Sea, central; thorium; in Chinese, English abstract ... 195
radionuclides, Th-230; fast and sensitive ICP-MS assay ... 196
interstitial water, flow; waves, effects; oxygen, benthic fluxes ... 202
South China Sea; carbonate dissolution; in Chinese, English abstract ... 205
novel pyropheophorbide steryl esters; Black Sea ... 206
aquatic; salinity, effect of; ammonium, sorption; nutrients, implications for benthic cycling ... 210
estuarine and freshwater; nitrogen, forms released; salinity, effects; ion pairing ... 219
Papua New Guinea, Fly Delta and Gulf of Papua; copper, vertical profiles ... 227
metal pollution; evaluation; in French, English abstract 230
corers, pneumatic, diver-operated ... 238
Danube River, submarine alluvial cone; structure at depth ... 245
Spain, Galicia, the Corrubedo beach-lagoon complex; coastal embayments; shoreline dynamics ... 262
erosion; deposition; measurement sensor ... 269
accumulation rates; Susquehanna River, Conowingo Reservoir; radionuclides, as rate trackers ... 271
Weddell Sea, S and E; carbon, organic, and opal; diagenesis, early; in German, English abstract ... 274
Long Island Sound; chlorophyll, early diagenesis; particulates ... 276
Pacific, S central; clay minerals ... 278
simple vacuum impregnation technique ... 279
Norwegian Sea, -Greenland Sea; organic matter; analysis at a glacial-interglacial boundary ... 280
osmium ... 285
organic matter, pristane/phytane ratio; geochemical significance; in Chinese, English abstract ... 287
distribution characteristics in; Taiwan Strait, central and northern; carbon, organic; nitrogen, total; phosphorus, total; in Chinese, English abstract ... 288
concentration and tube-diameter effects; particles, settling velocity measured beyond Stokes range; experiment, theory 290
organic-rich transitional facies; basins, silled; sea level, change, response to ... 292
pelagic, soft, high-latitude; dropstones; rocky mini-islands ... 297
lipids, sources of; isotopic analyses ... 299
fine-grained, unsaturated; gas bubbles, movement ... 300
Pacific, central; clay minerals; in Chinese, English abstract . 301
hemipelagic; North Pacific; Juan de Fuca Ridge; hydrothermalism; interactions ... 302
hydrothermalism, quantifying inputs; terrigenous deposition, sources ... 304
seismic stratigraphy; Jamaica; Discovery Bay ... 314
alkenone unsaturation ratio method; paleotemperature, SST . 321
Cretaceous-Tertiary boundary; South Pacific, DSDP site 596 ... 324
China; Huanghai Sea, S; fossil record ... 325
pelagic; South Atlantic, E; Delphineis, karstenii; diatoms, displaced neritic ... 330
volcanic deposits; volcanic eruptions, submarine; pyroclastic debris, fallout ... 376
volcanic rocks, arc-; Th, Pb, and Sr isotope variations ... 411
upper layers; benthic fauna, mixing by; bioturbation ... 468
Antarctica; South Orkney Islands, Signy Island; microphytobenthos, seasonality ... 539
Baltic Sea, S; Mollusca; metals ... 568
natural waters; pollution assessment; evolution of concepts and methods; 6 papers; in French, English abstracts ... 594
China, Jiaozhou Bay; seawater; phytoplankton; tin, speciation; in Chinese, English abstract ... 596
ore deposits; oceanic cycles as control ... 615
soft, by; waves, attenuation ... 691
Baltic Sea; plutonium, isotope ratios ... 780
copper, extractability; organic matter, degradation, as a function of ... 793
petroleum; steranes, 3-beta-ethyl, identification and significance ... 796
Trinidad, Gulf of Paria; trace metals, speciation ... 802
enrichment factors in; Baltic Sea, S; heavy metals ... 806

Italy, Olbia Bay; trace metals 808
sampling, techniques, intercomparison; radionuclide and heavy metal analyses 815
near-surface; China; Bo Hai, Sea, S; Huanghai Delta; mass physical properties 824
pelagic; Pacific, N and equatorial; eolian dust; geochemistry, paleoclimate implications 828
laminated, reflected in carbon isotopic ratios; California; Santa Barbara Basin; paleoceanography 829
recorded in; Pleistocene, Late; North Pacific, W; continental climate; paleoceanography, oceanic variability 838
Quaternary; seawater; organic matter; carbon, isotopic record, variations 842
Arabian Sea, NW; Hyalinea, balthica; fossil record 847
evidence for dewatering; Bengal Fan; Indian Ocean, central; lithospheric heat flow 859
Dinoflagellata, resting cysts; separation and concentration via centrifugation 1025
Oman, coastal waters; Persian Gulf; seawater; biota, oysters; hydrocarbons, content 1083
Arctic area; trace metals, persistence; drilling effluents, contamination by 1092
seawater; radium, -226; fish, mechanism of transfer to 1320
particulates, settling; organic matter, tracers; omega-oxoacids, implications for transport of photooxidation products to deep-sea environments 1327
recorded in; nutrients, status; carbon; nitrogen; sulfur ... 1330
pore waters; iron, dissolved, distribution at sub-mm resolution . 1345
submarine caves; organic matter, composition, fate 1346
Mexico, Tabasco shelf; petroleum pollution 1351
Turkey; Marmara; Sea of, NE, Golden Horn Estuary and Izmit Bay; heavy metals 1352
tropical estuarine; malathion, sorption 1355
particulates, and dissolved species; geochemistry, marine; symposium papers 1357
generation of fabrics and facies; Florida, S; British West Indies, Caicos Platform; burrow networks, faunal, excavation and storm infilling 1383
history, chemical characteristics; Bengal Fan; clay minerals 1384
elements, microdistribution; multifractal analysis 1386
Black Sea, geochemical relationships; sulfur; carbon, organic; iron 1387
geochemistry; Antarctica; Ross Sea 1393
Australia, S, off; Great Australian Bight shelf edge; carbonate platforms, prograding margin 1394
slump structures; Tertiary, Late; Ireland; Porcupine Basin 1397
Japan; Sea of; rare earths; cerium, diagenetic behavior ... 1398
Okhotsk; Sea of; Kamchatka, and Paramushir Island, off; gas hydrates 1399
marine geology; Adriatic Sea; Trieste; Gulf of 1400
$CaCO_3$, organic C, and sulfide S variations; Arabian Sea, SE; depositional environments 1402
physical properties; South Atlantic, equatorial; echo-sounders, Parasound; comparison of analog and digital records 1404
Riga; Gulf of; Baltic Sea; nature of dislocations of the sedimentary cover 1405
tidal rhythmites, clastic; key to history of Earth rotation and lunar orbit 1407
Pleistocene, upper; Weddell Sea, N; diatoms, unusual layers 1450
stratigraphy; Paleocene, Late; North Atlantic, W; Baltimore Trough; paleoceanography; in French, English abstract 1454
onshore and offshore; Papua New Guinea; Arafura Sea; petroleum seeps; detection methods 1567
acoustics, sound scattering; manganese nodules 1569
Indian Ocean, central basin; manganese nodules 1570
redox chemistry; manganese, MnO_2/Mn^{2+} as potential governing system 1572
contaminated; Polychaeta; Nereis, diversicolor; plutonium, and americium; bioaccumulation; radionuclides 1701
shoreline, fertilized; Prince William Sound; microbial populations; hydrocarbon biodegradation, potentials; Exxon Valdez, spill 1705
estuarine and freshwater; bacteria, TBT-resistant; tin, tributyltin 1711
sonar, parametric; echo spectroscopy; acoustics 1870
Mediterranean Sea, deltaic and lagunal environments; seawater; phenols, phenolic compounds 1966
Australia, Sydney; organic matter, characterization; air-sea interface; water column, subsurface; sewage outfalls 1972
soils; mercury, phases; stepwise thermal analysis technique .. 1985
aromatic hydrocarbons; rapid screening method 1990
accumulation in; British Columbia; Georgia; Strait of; heavy metals, Pb, Zn, Cu, Cd; carbon; nitrogen 1991
California, Palos Verdes shelf and Santa Monica Bay; toxicities, profiles; organic matter; contaminants, chemical 1996
Turkey; Golden Horn; pollution, chronology 1997
Barents Sea, N, outside Nordaustlandet; tidewater glaciers, sub-polar; depositional environments 2038
hardground formation; Mediterranean Sea; Bannock Basin 2043
Caribbean area, Nicaragua Rise vs the Bahamas; carbonate minerals; water column; mineralogy and chemistry ... 2052
preservation in; organic matter; chlorophyll pigments ... 2053
structural features; Mediterranean Sea, E; Hellenic Trench 2063
facies analysis; Pleistocene; Bannock Basin; Mediterranean Sea; tectonics, evolution, key to reconstruction . 2064
laminated; Alaska; Glacier Bay; fjords, seafloor prodeltaic deposits 2065
geochemistry, composition, diagenesis; Mediterranean Sea, E 2067
California, Borderland; Santa Barbara Basin; trace metals, accumulation 2068
S, O, and C isotopic composition; Quaternary, Late, alteration during; Black Sea 2071
pelagic; Bannock Basin; clay minerals; sapropels; clay origin and differentiation 2072
Mediterranean Sea, E; Bannock Basin; tephra, layers ... 2075
pollen and isotopic analysis; Mediterranean Sea, E; Bannock Basin; paleoclimate, 26 to 5 kyBP 2081
Cretaceous, Early to Mid-; North Sea, central; lithostratigraphy 2084
Arabian Sea, cores; Indus River; river discharges, influence; calcium carbonate, content 2088
Cretaceous-Tertiary boundary, sections, how complete?; chronostratigraphy 2098
Mediterranean Sea; Bannock Basin; Foraminifera, carbon and oxygen isotope composition 2108
Quaternary, Late; Lake Tanganyika; Africa, East; paleomagnetism, oscillations, chronological potential 2119
temperature, gradients; geothermal surveys 2120
evidence of relief inversion; Mediterranean Sea; Bannock Basin; crust 2153
Bengal; Bay of; metamorphism, greenschist 2154
recycled, isotope evidence for involvement; diamonds, formation; crust; mantle, interactions with 2155
shales; Canada, Scotian shelf; petroleum potential; petrophysical characteristics 2187
sulfides, biological tolerance of; vent communities; macrofauna 2207
bulk carbon and nitrogen balance; Ceriantheopsis, americanus; tube burrows, decomposition 2248
surface layer; North Atlantic; Radiolaria, distribution 2298
Ireland, Cork Harbour; shellfish; heavy metals; baseline .. 2314
Canada, shelves; seabed; shelf communities; symposium proceedings 2350
sewage sludge; waste disposal, dumping ground 2361
oxygen, distribution 2567
tetrahymanol; Ciliata, as widespread source 2568
Wales; PCBs; industrial effluents 2586
estimating sound velocity and velocity ratio; South Atlantic, NW; Brazil Basin 2588
coastal plain and fan delta, evolution; Jurassic, Lower; North Sea, Beryl Embayment 2590
shelf and slope; India, W, off Saurashtra; clay minerals 2596
origin, structure; Yellow Sea Trough 2599
Quaternary, Late; North Pacific, W; Ryukyu Trench, slope; paleoceanography, record 2611
borehole; Pacific, W tropical; Eniwetok Atoll; Foraminifera, biostratigraphy 2614
microbiota, limitations of nalidixic acid dependent viable direct counts 2732
microbiota, thymidine and leucine incorporation; bacteria .. 2753
deep-sea; Norwegian Sea, -Greenland Sea; Foraminifera; bacteria; distribution of hydrolytic activity 2754
bacteria, S-reducing; response to thymidine incorporation assays 2758
major determinant of microbial presence in; macrobenthos, zoo-, burrowing; bacteria 2762
cores and traps; particulates, analysis 2993
biogenic silica; suspended matter 2997

and resuspended sediments; Italy; Venice Lagoon; carbon, organic; nitrogen, organic; PCBs, contamination, relation with ... 3038
Wales, Dyfi Estuary; estuaries, microtidal, postglacial evolution ... 3046
mixing and accumulation rates; Mediterranean Sea; Lion; Gulf of ... 3056
influence of; hydrothermal fluids; beryllium, isotope concentrations ... 3059
Quaternary; China, mainland; climate, and climate change; paleoenvironments; collection ... 3069
Quaternary, Late; Arctic area; magnetostratigraphy; in German, English abstract ... 3075
elements characterized; Pacific, W; marginal seas; in Chinese, English abstract ... 3077
South China Sea, Zengmu Basin; tectonics; in Chinese, English abstract ... 3089
gas-charged; Baltic Sea, area; Skagerrak; pockmarks; clay diapirs ... 3133
Miocene, -Pliocene; Pacific; Solomon Islands, Iron Bottom Basin; hydrocarbons, potential reef traps ... 3135
biomarkers; Norway, shelf; oil, -source rock correlations ... 3136
distribution; Baltic Sea; metals; environmental implications ... 3244

sediments: abyssal
Atlantic, Madeira Abyssal Plain; manganese nodules; mechanism of surface retention of nodules during sedimentation changes ... 427

sediments: anoxic
phenols, halogenated, degradation ... 225
microbiota, processes affecting alanine and glutamic acid ... 488
thiols, evidence for biological turnover ... 1982
hypersaline; sulfur, inorganic speciation ... 2057
cyanobacteria, mat-building; sulfur, metabolism ... 2773

sediments: basin
stratigraphy; Taiwan, off, Tainan Basin; tectonics; crust, structure ... 241
Cretaceous; Tertiary; Africa, off; continental environments ... 319
Mesozoic; Mediterranean Sea; petroleum, reservoirs, potential ... 425
Cretaceous; Cenozoic; Bering Sea, W, geology; history ... 1420
Oligocene; Neogene; Bering Sea, W, geology; Commander Basin; stratigraphy ... 1427
Fiji; petroleum geology ... 3134

sediments: bay
Korea, W coast, Gunhung Bay; Quaternary, Late; shallow seismic stratigraphy, distribution pattern ... 298

sediments: boundary
Cretaceous-Tertiary boundary; Alberta, (Canada); diamonds, nm-size ... 835

sediments: carbonate
vuggy crust; Canada, NE; Baffin Island; hydrocarbons, seepage, formed by ... 291
equatorial; paleoclimate, reconstruction; extraction of high-resolution carbonate data ... 318
shallow-water; Eniwetok Atoll; strontium, isotopic variation; stratigraphic, chronostratigraphic, eustatic implications ... 841
subtidal; shoreline dynamics; implications for allocyclic vs autocyclic controls ... 1382
Pleistocene, Late; Pacific, W equatorial; Ontong-Java Plateau ... 1442

sediments: clay
isotopic composition variation; Tertiary; Texas, Gulf coast, off ... 1403

sediments: coastal
Irish Sea; neptunium ... 194
Japan; Tokyo Bay; Funka Bay; uranium ... 197
Baltic Sea; Kiel Bight; denitrification; in German, English abstract ... 221
diagenesis; Pleistocene, highstands, as cause; South Africa, Durban; shoreline dynamics ... 250
Italy, Emilia-Romagna coast; Po River, Delta; cesium, -137, distribution ... 270
metalseochemistry during sediment formation ... 275
Florida, Sarasota Bay; shoreline dynamics; carbonates, enrichment, hurricane-induced ... 1368
California, N; thermoluminescence dating ... 1385
Massachusetts; Buzzards Bay; carbon cycling, estimating remineralization ... 1984
India, off Kerala; quartz, detrital grains; surface microtextural study ... 2595
Adriatic Sea, E, long-term trends; organochlorines; DDT; PCBs ... 3041
Germany, Greifswalder Bodden; chemical studies; in German, English abstract ... 3054

sediments: delta
Egypt; Nile Delta; facies analysis ... 823
Quaternary, Late, evolution; Nile Delta, Burullus Lagoon region; shoreline dynamics ... 1365
Holocene; Nile Delta, N plain; petrology, distribution, deposition of plant-rich sequences ... 1367
Miocene, lower; Atlantic, E equatorial; Niger Delta, Afam clay member ... 1395
Holocene; Nile Delta; Egypt; Mollusca, faunas, paleobathymetry ... 1443

sediments: estuarine
denitrification, temporal variability ... 494
tin, butyltins 2 years after TBT use restricted ... 811
chitin mineralization; chitosan, pathway, importance of ... 1667

sediments: evaporite
formation; Messinian, refill channel; Mediterranean Sea; Valencia Trough, gorge ... 2018
age, origin; Messinian; Mediterranean Sea; Sr isotope studies ... 3074

sediments: fan
Weddell Sea, margin; Crary Fan ... 246
Mississippi Delta, and fan; sequence stratigraphy; discussion ... 845

sediments: fjord
Norway, Oslofjord; diagenesis, amino acid-, organic C and N mineralization ... 282

sediments: fluvial
U.S., E coast; estuaries, coastal plain ... 273

sediments: fumigated
Bivalvia, utilization by; Abra, alba; Polychaeta, utilization by; Eupolymnia, nebulosa ... 973

sediments: glaciomarine
Barents Sea; sound, velocity, and related properties; correlations ... 1401
Maine, inner shelf; seismic stratigraphy ... 2049

sediments: hydrothermal
microscopy, STM ... 2604

sediments: intertidal
Netherlands; Wadden Sea; denitrificationates, and nitrous oxide fluxes ... 222
meiofauna, abundance, short-term changes ... 463
oil pollution, estuarine; long-term chemical assessments ... 805
U.K.; Wales, Dyfi Estuary; tidal bedding, and cyclicities ... 2037
Korea, SW coast; mud flats, macrotidal ... 2044
Polychaeta; Arenicola, marina, burrows; bacteria, impact on ... 2733

sediments: margin
recorded by; Quaternary; Africa, NW and E margins; continental environments ... 311
Messinian, event; Mediterranean Sea, off Nice, France ... 320
oil, and gas accumulation; tectonics, aspects ... 423
Australia, E; bacteria, growth rates, heterotrophic activity ... 499
Mediterranean Sea, Gulf of Lions; slumping, scars; erosion, of slopes, and correlated deposits; geotechnical characterization ... 822
contributions to; organic debris; particulates ... 1328
Caribbean Sea; Barbados, prism; clay diapirism ... 1392

sediments: marsh
salt; sulfur, reduced, variability; pore water, parameters ... 2594

sediments: metalliferous
Juan de Fuca Ridge, near; hydrothermalism, manifestations ... 303
North Fiji Basin; accumulation rates, chemical partitioning, Q-mode factor analysis ... 3053

sediments: pelagic
Caribbean area; tectonics, history ... 310

sediments: polluted
bioavailability of pollutants; in French, English abstract ... 562
pulp mill; Quebec, Saguenay Fjord; Foraminifera, and thecamoeban distributions ... 565
mercury, desorption ... 1989
drilling muds, low-toxicity base oil; hydrocarbon degradation ... 1994

sediments: reef
Red Sea, Jubal Strait region ... 294
Holocene, emergent limestone; Mariana Islands; North Pacific, W; facies development model ... 820

sediments: seafloor
South Pacific, W; New Caledonia, off; ichnofacies, and recent organism traces ... 1447

sediments: shelf
Amazon Delta, outflow; river discharges 2
Amazon River; biogeochemical processes 216
Amazon Shelf Sediment Study; 6 papers 240
accumulation; China; Yellow Sea 266
Tertiary, uplift; Europe, U.K., France; chalk, porosity 283
North Sea; East Shetland Platform; distribution of granite and possible Devonian sediments 284
Amazon River, shelf; sedimentology, stratigraphy 296
Tyrrhenian Sea, N; seismic stratigraphy, paleogeographical evolution 309
carbonate; France, SW, Quercy; microfossils, assemblages . 326
Amazon River, shelf and delta; Brazil; AmasSeds study 579
sandstream; Brazil, NE; survey 611
mud; Colombia, Sinu River/Darien Gulf shelf; depositional facies, origin, controlling factors 819
California; Russian River, off 1389
Pleistocene, Late; Israel, N; Mediterranean Sea; origin of submerged marine terraces 1396
Norway, Frohavet area; structure and seismic stratigraphy ... 1419
and slope; Canada, E, Scotian shelf; organic matter, sources 1973
Canada, NW; geology, surficial 2013
Canada; symposium review of surficial geology 2015
Quaternary; Maine: Gulf of; stratigraphy 2016
Canada, Scotian shelf; Emerald Basin; deposition and diagenetic alteration 2031
dynamics; Canada; symposium review 2034
Canada, E; seabed geology 2036
Arctic area; Canada, E; surficial geology 2047
Canada, W 2050
Canada, E; pockmarks, gas-related; gases, vents 2055
Canada, W; British Columbia; geochemistry 2061
Canada, W; Beaufort Sea; chemical interactions 2062
downlapping; Tyrrhenian Sea, E margin; geometry, lateral variation, preservation 2073
Quaternary, Late; Canada, W; tectonics; glacial troughs 2126
Canada, E, off; oxygen, benthic consumption 2245
North America, coast and shelf; lignin, geochemistry 2582
Florida, SW, off; mud-bank destruction and transgressive sand sheet formation 2589
India, E, Krishna to Ganges River mouth; clay minerals ... 2597
India, E coast; phosphates, interstitial and adsorbed 2598
Norway, central; kaolinized, K-leached zones 3051
sediments: siliceous
Pacific, central equatorial; magnetization, stable remanent, origin 2624
sediments: suspended
resuspended; observations at 200-m depths; in French, English abstract 211
Amazon River, shelf 214
concentrations; acoustic backscattering 215
Delaware Estuary; phosphorus, particle-bound 2577
sediments: turbidite
Japan; Suruga Trough; variations in C-14 ages of organic fractions 295
sediments: volcanic
Quaternary, Late; South China Sea; origin, research; in Chinese, English abstract 397
sediment-water interface (More at INTERFACES, FLOOR ...)
uraniumn the oceans; where it goes and why 223
thermal interactions at; shallow seas 347
Polychaeta; Nereis, diversicolor; phosphates, dissolved, effects on exchanges 791
Okhotsk: Sea of; carbon, exchange 1344
nutrient flux; microphytobenthos, influence 1698
partitioning at; organic matter, DOC; mercury, methyl-mercury formation 1993
seep communities
Mexico: Gulf of, Florida Escarpment base; seafloor; crust, porous, deep in; bacteria, as producers of methane; report 1119
seeps: brine
abyssal; Mexico: Gulf of; Florida Escarpment, base of; biogenic methane 826
seeps: petroleum
Papua New Guinea; Arafura Sea; sediments, onshore and offshore; detection methods 1567
seismic anisotropy
lithosphere; subducting plates, above 903
advances in research; crust; geophysical exploration 3114
seismic data
refraction profiles; signal processing; isolation of source and receiver statics and scale factors in waveform inversion ... 1361
seismic gaps
hypothesis, ten years later; Pacific, Rim; earthquakes, regularity, severity 3118
seismic hazard analysis
earthquake prediction; symposium collection; 14 papers ... 907
seismic imaging
subducting lithosphere; trade-offs with deep path and near-receiver effects 902
seismic noise
spectra; microseisms, storm- 404
seismic profiling
marine; environmental assessment; discussion 2347
seismic strain
rate; Pacific, equatorial; Tonga; crustal deformation 886
seismic stress
accommodation; magma, overpressure, role; earthquakes, suppression; worldwide examples 1543
seismic surveys
Mediterranean Sea; MedNet broad-band network 234
OBS applications; in Japanese, English abstract 236
deep; Baltic Sea, S, Tornquist Zone; crust, structure 1511
shooting direction, a design issue 2001
refraction; seabed; technique using bottom shots 2003
data acquisition 2009
future; Ocean Seismographic Network, site preparation; seafloor; ODP Leg 136 initial report 2862
Costa Rica, accretionary prism; field program and migration examples 3128
seismic tomography
2-D synthetic study of global traveltime 235
geoid; plate motions; U.S. report to IUGG 887
Alaska, S, beneath; subducting slabs, Pacific 1534
imaging; North Pacific, W; subducted lithosphere; island arcs, beneath 1559
dual; imaging complex structures 2000
Aegean Sea; resolving power of images 2004
traveltime; methods comparison 2008
delay-time; Europe, beneath; Mediterranean Sea, beneath; Asia Minor, beneath; mantle, upper 2174
Oregon, S, beneath; Juan de Fuca Plate; lithosphere 2645
mantle, upper, global; seismic velocities and anisotropies 2650
seismic waves (More at WAVES ...)
mantle; predominance of long-wavelength anomaly 420
propagation theory; and synthetic seismograms; report to IUGG 814
arrival time inversion; North Sea; earthquakes, micro- 883
arrival times; North Sea; earthquakes, micro- 884
velocity gradients; mantle, upper 1533
excitation; tsunamis; efficiency of single forces vs double-couples 1573
Lau Basin, beneath; mantle; subduction zones; P-wave velocity anomalies 2149
source radiation patterns; Tonga Trench; subduction zones, beneath; crust, structure, constraints on 2179
long-period, radiation; South Pacific; Macquarie Ridge; earthquakes, 1989; mantle, evidence for coseismic slip? . 2637
P velocity structures; New Hebrides Arc, (Vanuatu), central; subduction zones 2652
Mid-Atlantic Ridge; mantle, upper, temperature and composition; geoid, and depth anomalies; joint data inversion 2653
North Sea, S; observations of shear-wave splitting from VSPs . 3113
seismicity
California, southern; crust, kinematics; faulting 400
Aegean Sea, S; crust 417
Tyrrhenian Sea, SE; Mediterranean area; crust 418
Japan Arc; crust, deep structure; volcanism; relationships . 889
Kurile Arc; earthquakes; shear waves; travel time, amplitude, waveform analysis 901
generation; Baikal Rift; mantle, upper; crust, lower 1518
deep; subducted lithosphere, thermal structure; earthquakes 1527
Vanuatu; arc tectonics 1540
Izu Peninsula, in and around; volcanism; tectonics, implications 2127
recent, implications; East African Rift, System; continental rifts 2163
lateral heterogeneities in seismic velocity; Costa Rica Rift; lithospheric heat flow; crust; DSDP site 504 2164
earthquakes, micro-; estimating hypocentral uncertainties; generalized inverse and grid search methods compared 2180
Mid-Atlantic Ridge, N; Jan Mayen, island; volcanism .. 2632

Aqaba: Gulf of; magnetic field, data 2635
long-term; Turkey; Istanbul; Marmara; Sea of 2636
4000 yr; Dead Sea Rift, along 2640
earthquakes, modelling the source; selected papers 3125
synthetic model; Middle America Trench; faults, interactions with; tectonics 3130
seismology (See also earthquakes, profiling; more at SOUND ...)
imaging with deep-water multiples 239
airguns, bubbleless 2007
seismometers (More at OCEANOGRAPHIC APPARATUS ...)
OBS facilities; a 4-institution consortium of 2 facilities 2866
seismotectonics
plate tectonics; U.S. report to IUGG 890
selection (More at EVOLUTION ...)
ecological selectivity; mass extinction; productivity, primary 1453
Selenastrum
capricornutum; aromatic hydrocarbons, volatile; toxicities, and bioconcentration, relationship; microalgae 552
selenium
determinations in marine samples by electrothermal a.a.s. 1309
levels; Tyrrhenian Sea, N; mercury, assessments; biota, edible; Se/Hg relationships 1699
Yugoslavia; Krka River, and Estuary; arsenic 1995
concentrations, variability and significance; birds, shorebirds; feathers 2319
Sellafield
discharges; cesium, -137; Chernobyl fallout; dispersion, marine 1961
SEM (More at MICROSCOPY ...)
semisubmersible<s> (More at VESSELS ...)
sensors
underwater; data telemetry, ocean; new methods for real-time observations 1054
sensors: chemical
odor plumes; instrumentation, submersible 1304
sensors: CTD
salinometers; instrumentation, history 1106
sensors: pressure
anemometers; improved version 734
CTD; temperature, dynamic response to 1951
serials
financial control of; libraries; scientific journals; problem of increasing costs; French and English 605
sessile biota
Japan, Nabeta Bay; community structure, temporal changes in; succession 974
sessile invertebrates
recruitment, community; larval settlement, and survival ... 976
Australia, S, Gulf of St. Vincent; communities, effect of patch size 3165
seston biomass
South Atlantic, SE; Namibia, coast; upwelling zones ... 1616
Seto Inland Sea (See also Inland Sea ...)
Japan; Sea of; Bering Sea; North Pacific, W; molybdenum, dissolved, distribution 1314
Japan; heavy metals, transport 1354
Japan; Amphipoda; Melita, 2 n.spp. 2295
settlement: larval
and survival; sessile invertebrates; recruitment, community 976
factors affecting initial settlement 1644
sewage (More at POLLUTION, WASTE ...)
sewage disposal (More at WASTE DISPOSAL ...)
sewage outfalls
Australia, Sydney; organic matter, characterization; air-sea interface; water column, subsurface; sediments 1972
benthos, temporal changes; pollution gradients, along; discriminating natural phenomena effects 2318
sewage pollution
bacteriology, quantitative and qualitative; surface microlayer 2330
gradient; meiobenthic communities, response 2332
sewage sludge
dumped; Mid-Atlantic Bight, 106-mile site; seafloor, area impacted 801
disposal sites, cessation of dumping; macrobenthic communities, recovery 2328
waste disposal, dumping ground; sediments 2361
tin, residues; tributyltin 3243
Seychelles
Curieuse Island; coastal zone, inshore; biogeochemical investigations 1953
in; Indian Ocean; Deccan Traps, flood volcanism; tholeiitic dykes 2631
shales
thermal maturity; Neogene, -Quaternary; Egypt; Nile Delta, Ras El-Barr well; clay minerals 3050
shallow seas
sediment-water interface, thermal interactions at 347
with inhomogeneous bottom; sound field, average, intensity .. 1856
shallow-water flows
pollutant transport, and dilution, wind-augmented 1091
shallow-water waves (More at WAVES ...)
intercomparison of truncated series solutions 56
propagation; reflective properties of parabolic approximations . 1173
decomposition of the Boussinesq equations into set of KdV equations 1832
Shanghai
China; sea level, changes since the early 1920s 48
shards (More at SILICATES ...)
Shark Bay
Australia, W; Bivalvia, in; cadmium, origin of high loads; particulates, uptake with 557
sharks
Australia, N; distribution, size, sex composition, reproductive biology, diet 460
tuna, yellowfin, schools; porpoises; seabirds; polyspecific associates 1622
great white, protection program; South Africa; Carcharodon, carcharias 2872
Shatskiy Rise
N of; Pacific; crust, structure 2165
shear: current
stresses and velocities; wave-current interactions; flow, over rough beds; model 723
and strain; California, off; Santa Monica Basin; eddy diffusivity; CTD profile results 1228
Pacific, E central; waves; variability 1232
shear flow (More at FLOW ...)
fluid dynamics; long waves; solutions of the Burns condition 121
inviscid; fluid dynamics; blocking 122
stratified, rotating; interaction with an isolated obstacle 1240
stratified; turbulence; mixing 2944
shear flow: barotropic
in; tropical cyclones, motion 1933
shear flow: stratified
stability 1891
shear layers
secondary instability; stratification, effects of 109
viscously decaying; particles, dynamics; mixing 110
shear: velocity
buoyancy, effects; currents; nonlinear interactions in a stratified fluid 1879
shear waves
Kurile Arc; earthquakes; seismicity; travel time, amplitude, waveform analysis 901
shelf (See also continental shelf, OCS; more at LITHOSPHERE ...)
Italy, Tuscany-Latium shelf; crust, seismic surveys; geodynamic implications 350
structure; Laptev Sea; Arctic area 1530
Canada, W; Porifera; sponge bioherms 2104
Canada, E; trawling, effects; dredging, effects; ocean dumping 2360
distribution on; U.S., SE; organic matter, terrestrial DOM .. 2982
shelf circulation
Canada, E 1785
Europe, NW; tides; EUROSPILL databases 3242
shelf communities
North America; Arctic Ocean, shelf; benthic ecology; invertebrates, benthic 2242
Canada; benthic ecology; symposium review 2250
Canada, shelves; seabed; sediments; symposium proceedings 2350
supra-benthic; Fundy; Bay of; Saint Lawrence Estuary; Amphipoda; subcommunity structure compared 2803
Gulf Stream, frontal eddy influence; U.S., shelf; productivity 3256
shelf currents
Canada, W coast; mixing; physical oceanography 1763
and slope; Great Barrier Reef; momentum, linear systems analysis; flow 2901
shelf ecosystems
trophic dynamics, and structure; model studies 1578

Canada, W; British Columbia; benthic biology 2240
shelf exploration
Canada; Arctic area; engineering, concerns; oil 2354
shelf fronts
Ireland; satellite and field observations 36
shelf macrofauna
Labrador; Newfoundland; functional approach to studies . 2244
shelf seas
Europe, NW; temperature, surface and bottom 4
Europe, NW; stratification 10
Europe, NW; thermocline, depths; temperature 624
shelf sedimentation
Canada, W; Beaufort Sea 2033
Quaternary, Late; Canada, E; Nova Scotia, off; sea level, changes 2056
shelf sediments
Amazon Delta, outflow; river discharges 2
Amazon River; biogeochemical processes 216
Amazon Shelf Sediment Study; 6 papers 240
accumulation; China; Yellow Sea 266
Tertiary, uplift; Europe, U.K., France; chalk, porosity 283
North Sea; East Shetland Platform; distribution of granite and possible Devonian sediments 284
Amazon River, shelf; sedimentology, stratigraphy 296
Tyrrhenian Sea, N; seismic stratigraphy, paleogeographical evolution 309
carbonate; France, SW, Quercy; microfossils, assemblages . 326
Amazon River, shelf and delta; Brazil; AmasSeds study 579
sandstream; Brazil, NE; survey 611
mud; Colombia, Sinu River/Darien Gulf shelf; depositional facies, origin, controlling factors 819
California; Russian River, off 1389
Pleistocene, Late; Israel, N; Mediterranean Sea; origin of submerged marine terraces 1396
Norway, Frohavet area; structure and seismic stratigraphy ... 1419
and slope; Canada, E, Scotian shelf; organic matter, sources 1973
Canada, NW; geology, surficial 2013
Canada; symposium review of surficial geology 2015
Quaternary; Maine; Gulf of; stratigraphy 2016
Canada, Scotian shelf; Emerald Basin; deposition and diagenetic alteration 2031
dynamics; Canada; symposium review 2034
Canada, E; seabed geology 2036
Arctic area; Canada, E; surficial geology 2047
Canada, W 2050
Canada, E; pockmarks, gas-related; gases, vents 2055
Canada, W; British Columbia; geochemistry 2061
Canada, W; Beaufort Sea; chemical interactions 2062
downlapping; Tyrrhenian Sea, E margin; geometry, lateral variation, preservation 2073
Quaternary, Late; Canada, W; tectonics; glacial troughs 2126
Canada, E, off; oxygen, benthic consumption 2245
North America, coast and shelf; lignin, geochemistry 2582
Florida, SW, off; mud-bank destruction and transgressive sand sheet formation 2589
India, E, Krishna to Ganges River mouth; clay minerals ... 2597
India, E coast; phosphates, interstitial and adsorbed 2598
Norway, central; kaolinized, K-leached zones 3051
shelf-break fronts
Australia; Bass Strait, cascade; nutrients; plankton 440
formation and maintenance in an unstratified flow 1165
shelf-slope water fronts (More at FRONTS ...)
shellfish (See also krill, lobsters, mussels, oysters, prawns, shrimp ...)
Ireland, Cork Harbour; sediments; heavy metals; baseline 2314
shellfish poisoning
paralytic; California; prevention program 1927-89 588
shells
calcite, influences on composition; Brachiopoda; fossil record; paleoceanography 2605
fossil and modern; Mollusca; fossil record; amino acid racemization, /epimerization, kinetics of 2615
shells: calcareous
and tests; microscopy, preparation for using hydrofluoric acid 3081
shelves: continental
Canada; physical oceanography; symposium overview 1764
shelves: glaciated
sedimentation 2040
shelves: ice
numerical modelling of dynamics 78
Antarctica; Ross Ice Shelf, dynamics 1843
circulation; water masses; ice-ocean interactions modelled . 2459
flow; Antarctica; Filchner-Ronne Ice Shelf; in German, English abstract 2922
Shikoku Basin
Japan, off; basin circulation, mid-depth 1135
ship<s> (More at VESSELS ...)
ship groundings
Red Sea; coral reefs 3207
shipping liability
international law; toxic chemicals; carriage of hazardous and noxious substances; development of a liability regime . 2878
ships
submarines; magnetohydrodynamic thrusters; propulsion, systems; theory, pros and cons 1079
Shirshov Ridge
Komandorskiy Basin; seafloor spreading; crust, structure 355
shoaling: pycnocline
Mediterranean Sea, E; sea level, lowering, due to 1439
shoaling waves
higher-order, variations on 65
lab observations 2914
shoals
over; breaking waves, and shoaling 1830
shorebirds (More at BIRDS ...)
waders; macrobenthos, accessible, may be marginal prey 1647
shoreline dynamics (More at COASTS, FLUID DYNAMICS ...)
multiple-bar; barrier bars; edge waves, LF, relation to 247
Europe; coasts, morphogenetic zones and transitions; coastal processes 248
coasts; beachrock, formation; implications for coastal evolutionary models 249
Pleistocene, highstands, as cause; South Africa, Durban; coastal sediments, diagenesis 250
U.S.; coasts, historical changes; erosion, mapping; CZM .. 251
coasts, recession and accretion; temporal analysis 252
gravel bars, migration and overstepping 253
Argentina; Bahia Blanca, El Toro Channel, geomorphological evolution; estuarine channels 256
beach replenishment; CZM; discussion 257
U.S., Littoral Environment Observation Program; beaches, observations 259
Quaternary, Late; Iceland, northern; sea level, rising; deltas, and spits, littoral terraces 260
Spain, Galicia, the Corrubedo beach-lagoon complex; coastal embayments; sediments 262
Quaternary, Late, evolution; Nile Delta, Burullus Lagoon region; delta sediments 1365
Egypt; Nile Delta, Rosetta-Nile Promontory; satellite monitoring of shoreline changes 1366
Florida, Sarasota Bay; coastal sediments; carbonates, enrichment, hurricane-induced 1368
onshore-offshore transport; sediment transport; beaches .. 1370
carbonate sediments, subtidal; implications for allocyclic vs autocyclic controls 1382
Pliocene; Pleistocene; Australia, W margin; coastal zone, events, history 2022
tidal inlets; stability studies 2025
beaches, sandy; swash zone, and effluent line, dynamics 2026
shoreline litter
Canada; Halifax Harbor 595
shorelines: interglacial
Australia; review 2027
shores
platform scarps, elevation; wave height, and rock strength, influence; laboratory approach to the problem 3047
shores: rocky
Gastropoda; algal colonization; grazing, impacts 972
ecology; China, Qingdao 979
benthic fauna; humans, trampling effects 2342
shores: sandy
zonation, patterns 434
shrimp (More at SHELLFISH ...)
Palaemonetes pugio; detritus, amorphous; nitrogen, assimilation from; fish, *Cyprinodon variegatus* 959
Siberian Traps
Permian-Triassic boundary; flood basalts; volcanism, rapid eruption 388
Sicily: Strait of
Mediterranean Sea; Tunisia, shelf; barotropic tides 2911
side looking airborne radar (Use SLAR)
Sierra Leone Rise
Cenozoic; Atlantic; lamprophyric volcanism; tectonics; implications for regional tectonics and stratigraphic time scale 1499

signal agents (More at CHEMOTAXIS ...)
signal lamps (More at COMMUNICATIONS ...)
signal processing
postprocessing system; echo sounder data; acoustics 91
and precise orbit computation; satellite altimetry, Seasat ... 623
oceanographic data; interpolation method for ocean and estuarine studies 1060
Norwegian Sea; satellite altimetry 1123
techniques for tide removal compared; currents, ADCP measurements 1147
hydrooptical investigations; experimental data, spikes in; algorithm for spike rejection 1216
seismic data, refraction profiles; isolation of source and receiver statics and scale factors in waveform inversion ... 1361
geophysical data, display, interpretation; computer graphics; image analysis 2006
neural networks; acoustics 2472
silica
behavior; hydrothermal circulation; mid-ocean ridges; coupled fluid flow and reaction 1416
-132 profiles; Pacific; Indian Ocean 2974
silica: biogenic
dissolution; Pacific, central equatorial; organic matter, benthic carbon degradation 2580
sediments; suspended matter 2997
production; Weddell Sea; Scotia Sea 3201
silicate weathering
importance as control; ocean-atmosphere interactions; carbon cycle; oxygen cycle 1350
effects of; atmospheric carbon dioxide; global temperature 1904
silicates (See also shards, tektites, glass ...)
atmospheric carbon dioxide; carbonates; global shifts in chemical weathering and decarbonation 2389
siliceous sediments (More at SEDIMENTS ...)
Pacific, central equatorial; magnetization, stable remanent, origin 2624
silicon
micro-; seawater; oscillopolarographic determination 169
silicones
polyorganosiloxanes; Australia; Sydney, area offshore; pollution 799
Siphonophora
Muggiaea, kochi; laboratory life cycle 2781
populations; Caribbean Sea, off Mexico; Campeche Bank; upwelling zones 2785
vertical distribution of 34 taxa; Angola Current; Benguela Current; currents, confluences, at 2789
South Atlantic, W; Coelenterata, distribution; Rhodalia, miranda; ecological, oceanographic implications 2792
size analysis: particle
light scattering, techniques; applications, review 166
Skagerrak
Kattegat; Chrysochromulina, polylepis; picoplankton blooms, May-June 1988; environmental conditions, possible causes, effects; ICES workshop report 949
Kattegat; circulation; oceanography over the past 8000 yr .. 1436
crust, seismic reflectivity 1537
Scandinavia; tectonics; basin subsidence 1546
plankton, uptake, intracellular storage (nitrate); carbon; nitrogen 1610
hydrography; plankton; particle size; chlorophyll, -a concentration; relationships 1979
Baltic Sea, area; sediments, gas-charged; pockmarks; clay diapirs 3133
skeletons: animal
component of; chitin, paleoecology 1452
Skuphonura
kensleyi n.sp.; Colombia, Caribbean coast; Isopoda, anthuridean 2274
slicks (See also films; more at OIL POLLUTION ...)
slicks: oil
microbial degradation; enhancement using slow-release fertilizer; in Chinese, English abstract 591
slicks: surface
wind, speed, relation to; occurrence frequencies 1884
slope
and rise; North Atlantic, W; sediment transport, mass movements; submarine processes 830
slope sedimentation
Norway, 67-71 N 1408
slope water (More at OCEAN, WATER ...)
sludge (More at WASTE ...)
sludge: sewage
dumped; Mid-Atlantic Bight, 106-mile site; seafloor, area impacted 801
disposal sites, cessation of dumping; macrobenthic communities, recovery 2328
waste disposal, dumping ground; sediments 2361
tin, residues; tributyltin 3243
slump<s> (More at EROSION ...)
slumping
scars; Mediterranean Sea, Gulf of Lions; margin sediments; erosion, of slopes, and correlated deposits; geotechnical characterization 822
slurries: sediment
in; metals, Cu, Cd, Ni, Pb, Zn, Fe, Mn,; mobility under anaerobic and 20% air saturation conditions 792
Smith-McIntyre grab (More at GRABS ...)
snails
native vs introduced, interactions; North Pacific, NE, coastal marshes; Gastropoda; biological invasions 1577
snow
climate, feedback; circulation modelling; feedback interpretations in 17 GCMs 737
cover; sea ice; climate, competing effects in shaping 1205
evidence for recent increases in accumulation; Antarctica; ice cores 1849
snow: marine
fecal pellets, zooplankton; metals, scavenging and retention; particulates, by 1978
sodium chloride (More at SALT ...)
seawater; potassium chloride; activity coefficients 193
SOFAR channels (More at OCEAN, SOUND ...)
software: computer
structural geology; microcomputer techniques and applications 1999
soil<s> (More at SEDIMENTS ...)
soils
sediments; mercury, phases; stepwise thermal analysis technique 1985
soils: marsh
carbon, organic; nitrogen, total; loss on ignition and Kjeldahl digestion, calibration 171
solar activity (See also Sun ...)
solar cycle
length; climate; relationship 1906
solar orientation
Decapoda; Talitrus, saltator (British sandhoppers) 2822
solar radiation (See also insolation; more at RADIATION ...)
Japan, S of; in-situ measurements 128
water column, attenuation in 1850
German Bight, data; application of Dobson and Smith's model 1902
solitary waves (More at WAVES ...)
associated with; Sulu Sea; internal swash 698
solitons; report 2886
stability 2913
solitons, uses, solutions 3259
solitons (More at WAVES ...)
a front of; waves, nonlinear, traveling 2443
solitary waves; report 2886
uses, solutions; solitary waves 3259
solitons: internal
sound waves; acoustics, resonant interactions in the coastal zone 1874
Solomon Islands
New Georgia group; basalts, rock formation; rare earths, rectilinear partition coefficient function 389
Pacific; Vanuatu; petroleum potential; island arcs 1564
Pacific; fault zones, strike-slip; seabed minerals, potential, effects on 3131
Iron Bottom Basin; Miocene, -Pliocene; Pacific; sediments; hydrocarbons, potential reef traps 3135
Solomon Sea
Papua New Guinea; collision tectonics; collision propagation 2130
Somali Basin
Arabian Sea; bottom circulation 12
Somali Current
Arabian Sea; currents; undercurrents, seasonal, modelling 2904
Somerset
Berrow Flats; U.K.; intertidal zone; diatoms, epipelic, seasonal changes 1024

sonar (More at OCEANOGRAPHIC APPARATUS, SOUND ...)
passive; acoustics; receiver depth selection ... 90
towed multi-beam; acoustics ... 1852
parametric; echo spectroscopy; sediments; acoustics ... 1870
systems testing; Atlantic, Bremerhaven, Germany to Puerto Madryn, Argentina; Romanche Fracture Zone; in German, English abstract ... 3232
sonar transducers
in-situ calibration ... 103
sonobuoys (More at BUOYS ...)
sound (See also acoustics, choruses, explosions, hydrophones, noise, scattering layers, sediment sound velocity, SEISMOLOGY, SOFAR channels, sonar, transducers; for atmospheric, oceanic and lithospheric acoustic properties see also AIR, ATMOSPHERE, LITHOSPHERE, OCEAN, seawater, SEDIMENTS, WATER ...)
transmission; fluid-solid interface, rough; acoustics; identity of the Rayleigh-Fourier and extinction theorem method solutions ... 94
underwater, measurements; Beaufort Sea; acoustics; offshore platforms, drilling, from ... 712
velocity in water; acoustics, Brillouin scattering; aircraft laser sensing ... 713
refraction; islands; seamounts; acoustics ... 716
propagation underwater; acoustics; implementation of the parabolic equation ... 717
velocity, and related properties; correlations; Barents Sea; glaciomarine sediments ... 1401
vertical speed profiles; acoustics; convection, thermal, effect of ... 1853
attenuation in sediments; acoustics ... 1855
dispersion in a porous bottom; acoustics ... 1859
generated by; breaking waves; acoustics ... 1869
propagation; Australia, Perth, from; Bermuda, to; acoustics, adiabatic mode interpretation ... 2466
LF absorption, investigation; seawater ... 2474
sound channels (More at OCEAN ...)
parameters; acoustic waveguides, sediment layer ... 1862
inhomogeneities; acoustic waves, attenuation ... 1873
sound field
average, intensity; shallow seas, with inhomogeneous bottom ... 1856
spectrum properties; acoustics, point source in moving medium 1860
interference structure; acoustic waveguides; random medium influence ... 1861
of source; acoustics; air-water interface, presence ... 1866
oceanic sources; acoustics; instrumentation, underwater recorder as navigation aid for RAFOS floats ... 1867
sound reverberations
acoustics; long-range, from the surface ... 1851
sound scattering
acoustics; parametric sonar investigations ... 105
acoustics; current jets, particle-laden, from ... 1863
acoustic waveguides; boundary integral equation methods ... 2463
acoustic waveguides; Rayleigh-Fourier and extinction theorem methods compared ... 2468
sound waves (More at WAVES ...)
internal solitons; acoustics, resonant interactions in the coastal zone ... 1874
sounding: laser
water column, upper ocean; dispersive distortion of return pulses ... 1761
source rocks: petroleum
geological record, world-wide, stratigraphic intervals ... 2657
South Africa
Durban; Pleistocene, highstands, as cause; shoreline dynamics; coastal sediments, diagenesis ... 250
Agulhas Bank, SE of; crust, susceptibility, Koenigsberger ratio; magnetic field, reversals ... 403
phytoplankton, kelp-bed populations; upwelling, areas ... 438
Algoa Bay, over; surface wind ... 753
Swartkops Estuary; Algoa Bay; phosphates, exchange ... 787
Berg River Estuary; benthic invertebrates; distribution, abundance, productivity ... 977
Benguela Upwelling, area; chlorophyll, *-a* distribution; phytoplankton, possible effects on; global warming; fish, pelagic, implications for ... 1586
3 eastern Cape estuaries; phytoplankton biomass; primary production ... 1587
Palmiet; estuarine circulation; tides, dynamics ... 1778
W, off; Chaetognatha; Sagitta, friderici; diel migration, feeding patterns ... 2230
off; Agulhas Retroflection, and Subtropical Convergence; Cetacea, sightings ... 2699
E Cape shore; intertidal macroalgae; community succession ... 2715
E coast; Brachyura; Ocypodidae; ghost crabs ... 2812
Carcharodon, carcharias; sharks, great white, protection program ... 2872
W coast; Holothuroidea, 3 taxa; effect of water movement on distribution and interaction ... 3179
Copepoda; Calanus, n.sp. ... 3184
False Bay, environmental assessment 20 years later; symposium 3230
South America
Paleozoic, Late; tectonics, rotations; plate motions; paleomagnetism ... 2139
South Atlantic (More at Atlantic ...)
equatorial currents, SSEC; geostrophic transport ... 32
E; Delphineis, karstenii; sediments, pelagic; diatoms, displaced neritic ... 330
evolution; Jurassic, Late, since; plate tectonics ... 365
density, ratio distribution; pycnocline, salt finger susceptibilities ... 625
near 13°S, 5°E; tropical gyres ... 638
E; deep circulation ... 648
E; subtropical gyres; eddy, deep-reaching, anticyclonic ... 659
W, deep boundary current; Antarctic Circumpolar Current; currents, observations ... 666
E; upwelling filaments; currents ... 679
E; Benguela Current, region; ichthyoplankton, guide to ... 945
E; Namibia, off; Decapoda; biogeography, community structure ... 1008
Bullard Fracture Zone; seafloor; spreading ridges, tectonic fabric ... 1364
equatorial; sediments, physical properties; echosounders, Parasound; comparison of analog and digital records ... 1404
SE; Namibia, coast; seston biomass; upwelling zones ... 1616
Angola Basin; water masses; Antarctic Bottom Water ... 1818
over; atmospheric aerosols; particulates; lipids, terrestrial 1946
NW; Brazil Basin; sediments, estimating sound velocity and velocity ratio ... 2588
subantarctic; Eocene, Mid-, to Lower Miocene; calcareous nannofossils; magnetobiochronology ... 2620
W; Coelenterata, distribution; Siphonophora; Rhodalia, miranda; ecological, oceanographic implications ... 2792
W, activity in; krill; commercial fishing ... 2873
South Carolina
Bly Creek system; marshes; estuaries; detritus, and nutrients, annual material processing ... 482
North Carolina; hurricanes, Hugo, landfall; surface wind, distribution ... 1292
coast; atmospheric jets, coastal ... 1922
Folly Beach; coastal development; hurricanes, Hugo 1989; erosion policy, national, needed; CZM, failings ... 2875
South China Sea
currents; numerical simulation; in Chinese, English abstract ... 28
storm waves; typhoons; in Chinese, English abstract ... 53
central; sediments; thorium; in Chinese, English abstract ... 195
sediments; carbonate dissolution; in Chinese, English abstract ... 205
Quaternary, Late; volcanic sediments; origin, research; in Chinese, English abstract ... 397
Vietnam, coast; flooding, calculating ... 2029
islands, sublittoral zone; Scleractinia, distribution; light, dependence ... 2794
N; tides; tidal currents ... 2909
N, during; climate, anomalies; El Niño, 1986-87; in In Chinese, English abstract ... 2946
Zengmu Basin; sediments; tectonics; in Chinese, English abstract ... 3089
South Orkney Islands
Signy Island; Antarctica; sediments; microphytobenthos, seasonality ... 539
South Pacific (More at Pacific ...)
Indian Ocean, SE; tropical cyclones; 1988-89 season ... 156
DSDP site 596; Cretaceous-Tertiary boundary; sediments 324
gyre; Amphipoda, hyperiid ... 520
tropical aquaculture; advances; 75 papers ... 572
water masses, Antarctic Intermediate Water path; equatorial flow ... 677
W, Woodlark Basin; basalts, submarine; abundances of volatiles and genetic relationships ... 877
W; New Caledonia, off; ichnofacies, and recent organism traces; seafloor sediments ... 1447

superswell; lithospheric heat flow, constraints; lithospheric swells ... 1475
W; New Hebrides Arc, (Vanuatu); accretionary wedges; guyots, Bougainville Guyot; collision tectonics; structure of the arc-guyot collision zone ... 2123
Peru Upwelling, significance; thermocline ventilation ... 2425
air-sea interactions; carbon dioxide, exchange; seasonal fluxes ... 2513
W, and Nazca Plate; Eocene; propagating rifts; tectonics ... 2625
Macquarie Ridge; earthquakes, 1989; seismic waves, long-period, radiation; mantle, evidence for coseismic slip? 2637
Lau and North Fiji basins; bacteria, anaerobic S-dependent thermophilic; hydrothermal vents; isolation, identification ... 2720
W; Lau Basin, tectonic environment; hydrothermal deposits; geochemistry ... 3062
W, Teahitia-Mehitia, Mcdonald hot spot areas; hydrothermal deposits, Fe-rich ... 3065
Manihiki Plateau; volcanoes, mud or lava?; seamounts, surrounding ... 3099
North Fiji Basin; spreading centers, petrology, geochemistry; magma, sources ... 3115
North Fiji Basin; spreading centers, geological structure ... 3129
SW equatorial; manganese nodules; islands, EEZs ... 3139
mineral resources; hydrothermalism; sedimentary basins; geology, geophysics ... 3144
a decade of research; scientific data; the marine geoscience data base ... 3231

South Shetland Trench
Antarctic Peninsula, area; crust, seismic reflection investigations; preliminary results debated ... 409

Southeast Indian Ridge
accretion tectonics; periodicity in the accretion process ... 2129

Southern California Bight
San Pedro Basin; Foraminifera, planktonic; upwelling environments; seasonal C and O isotopic variability ... 1017
San Pedro Basin; Foraminifera, planktonic, response; upwelling, and seasonal hydrographic conditions ... 2362
mixing, vertical; cosmogenic tracers; radionuclides, P-32, Be-7 ... 2480

Southern Hemisphere
climate, seasonal summary winter 1990 ... 129
Northern Hemisphere; tropospheric water; wintertime asymmetry ... 1255
atmospheric circulation; intraseasonal variations ... 1775
atmospheric oscillations, semi-annual; mechanism of the SAO ... 1924
atmospheric waves; storms, eddy energy budget; life cycle of a cyclone wave ... 1925
Northern Hemisphere; biological invasions; fossil record; biotic interchanges; consequences ... 2202
wind, subtropical, short-term maxima; circulation, general ... 2528
storm tracks ... 2547
circulation sensitivity; Antarctica; ice leads, pack; ocean-atmosphere interactions ... 2933

Southern Ocean (More at OCEANS ...)
food webs, unusually simple; predators, birds, mammals; a major leak in the biological carbon pump ... 433
Kerguelen Archipelago, around; ichthyoplankton, influences on distribution ... 445
Drake Passage; particulates; organic matter; carbon isotopic variations ... 789
Oligocene, Earliest; surface cooling, abrupt, evidence for ... 844
Dinoflagellata; plankton growth, and herbivory; possible effects on phytoplankton biomass ... 1022
oceanographic data; examination of several data sets ... 1066
krill, Antarctic, abundance; acoustic measurements ... 1748
global warming; iron fertilization; Geritol fix refuted ... 1754
circulation modelling; open boundary condition in the U.K. FRAM model ... 1787
Kerguelen Island, and Heard Island, near, autumn of 1987; fronts, south polar front ... 1815
Atlantic sector; Eocene; Oligocene; paleoceanography; ODP sites 689B and 690B ... 2087
Pliocene; paleoclimate, evolution; sea level, ice cover, and circulation ... 2095
Weddell-Scotia Confluence, area; phytoplankton biomass, and composition ... 2215
Phalacrocorax, atriceps; diving, patterns and performance; seabirds, blue-eyed shag ... 2255
sub-Antarctic; biota; organochlorines, chlorobiphenyls and pesticides ... 2316
circulation modelling; FRAM model ... 2379
Prince Edward Islands; seabirds; ornithological research; review ... 2719
Decapoda, shrimps; spatial distribution photographed underwater ... 2807
Indian sector; organochlorine pesticides; PCBs; plankton, phyto- and zoo- ... 2842
King George Island; Amphipoda, emphasized; benthic fauna; in German, English abstract ... 3170
Antarctica, Powell Basin, Kapp Norwegia etc; Polarstern expedition contributions; in German, English abstract ... 3234

Southern Oscillation
El Niño, ENSO events; sea level pressure; Darwin-Tahiti SOI data back to 1876, comparison with recent ENSO events ... 137
Australia, SE, waters around; El Niño; ENSO episodes characterized ... 744
and 500 mb ridge position in April; surface temperature; monsoon rainfall, Indian; relationships ... 1281
ocean-atmosphere interactions; circulation, general ... 2525
El Niño; atmospheric pressure, systems; influence on the subtropical high ... 2961

South-West Africa (See also Namibia)

spaceborne radar
planetary research; microwave remote sensing, and telemetry; Magellan (Venus) and various earth observing systems; 8 papers ... 1057

Spadella
Antarctica, first record; Chaetognatha, benthic polar ... 2782

Spain
NE coast; submarine canyons; coastal flow, modification ... 14
Galicia, the Corrubedo beach-lagoon complex; coastal embayments; shoreline dynamics; sediments ... 262
Cadiz; Gulf of, waters; trace metals, enrichments ... 797
3 Galician estuaries; phytoplankton, assemblages; chlorophyll maximum layer; hydrography relationships ... 2679
Barcelona; sea breezes, features ... 2964

Spartina
alterniflora; biomass, aboveground vs. belowground ... 531
alterniflora, influence of; Brazil, SE, Paranagua Bay; macrobenthos, structure and temporal variability of associations ... 987

speciation (More at EVOLUTION ...)
invertebrates, marine families; extinction; probabilities of origination, persistence, extinction ... 2338

species (More at BIOLOGY ...)

species: endangered
sea turtles, Kemp's ridley, evolutionary distinctiveness ... 956
and rare; Canada; fish; mammals, marine; status reports ... 1733
Hawaiikure Island; seals, monk; new protection program ... 2890

species: exotic
U.S., Atlantic coast, first discovery 1988; Decapoda, grapsid; Hemigrapsus, sanguineus, a W Pacific crab ... 1009
invasions; designer fish, test-tube; genetic engineering; cautions required ... 2367

species extinction (More at extinction ...)

species: introduced
test of criteria; Isopoda; Synidotea, laevidorsalis, global invasion by ... 1004

species invasions
biota, exchanges among; episodes of past (fossil record) interchange, implications for the future ... 920

species: keystone
mangrove forests, dynamics; productivity; nutrients, soil; crabs, burrowing, influence ... 2254

species sequencing
Australia, NE, Endeavour River; mangroves; zonation, analysis ... 481
method; ecology, studies ... 484

spectral analysis
jittered sampling ... 2348

spectrometer<s> (See also microspectrometers; more at REMOTE SENSING ...)

spectrometry
atomic emission; update ... 1308
chromatography; pyrolytic analysis; analytical chemistry; recent developments ... 2968
plasma-mass; particulates, mineralogy and chemistry; spectroscopy, synchrotron x-ray, Mossbauer ... 2991
ICP-MS; particulates, characterization; trace analysis ... 2998
x-ray fluorescence; particulates, sampling ... 2999

spectroscopy
atomic; analytical chemistry; development, progress 172
synchrotron x-ray, Mossbauer; particulates, mineralogy and chemistry; spectrometry, plasma-mass 2991
spectroscopy: echo
sonar, parametric; sediments; acoustics 1870
spheroids: impact
authigenesis; Cretaceous-Tertiary boundary; constraints for high resolution stratigraphy 1435
spherules: cosmic
geologic record 2196
spherules: impact
Cretaceous-Tertiary boundary; geochemical constraints on source region of glasses 2101
spills: oil
risk modelling 592
major; Caribbean area; Panama, coast; corals, reef-, subtidal; short-term ecological consequences 1035
chemical dispersion; droplet size distributions, mathematical model 1085
Alaska; Prince William Sound; bioremediation, efforts, results of; Exxon Valdez 1726
Alaska; Prince William Sound; Exxon Valdez; bioremediation, and other strategies; situation update 1727
Arctic area; burning, proposed as possible cleanup technique; report 1755
Alaska; Prince William Sound; bioremediation, effects; mutagenicity, on; Exxon Valdez 2356
treatment; effectiveness testing of treatment agents 2357
Kuwait, Al Ahmadi, as origin; India, response, concerns 2363
simulations; Europe, NW; tides; EUROSPILL databases ... 3242
simulations; circulation, tidal and residual; EUROSPILL databases 3246
spin splitters (More at SPLITTERS ...)
spinup
bottom topography; circulation; abyssal basins 1774
spits (More at COASTS ...)
Spitsbergen
Quaternary; light, intensity and spectra effects; sediment thermoluminescence, reduction; implications for dating sequences 2002
spoils (More at WASTES ...)
sponge bioherms
Canada, W; Porifera; shelf 2104
spray (More at AEROSOLS ...)
spreading (More at PLATE TECTONICS ...)
spreading: backarc
Japan; East African Rift; rifting, active mechanism; continents, breakup 3097
spreading centers
extinct; gravity, anomalies; as test of gravity models of active centers 338
overlapping; East Pacific Rise; temporal evolution 358
Lau Basin, Valu Fa Ridge; magmatism, subalkaline andesite; chemistry, petrogenesis 1508
Antarctic-Phoenix; trenches; ridges, crests; subduction zones; effects of interactions 2628
rifting, and rift systems, global; tectonics; structural forms and processes, symposium papers 3094
Dead Sea Rift; continental rifts 3096
petrology, geochemistry; South Pacific; North Fiji Basin; magma, sources 3115
beneath; mantle, melt extraction; mid-ocean ridges 3127
geological structure; South Pacific; North Fiji Basin 3129
along; hydrothermal circulation; NOAA's VENTS program 3233
spreading ridges
tectonic fabric; Bullard Fracture Zone; South Atlantic; seafloor 1364
slow-, mechanics; Quaternary; Djibouti; Asal Rift; crustal deformation 3093
spreading: seafloor
Komandorskiy Basin; Shirshov Ridge; crust, structure .. 355
rate; mid-ocean ridges, flank roughness; inverse square-root dependence 364
asymmetric; Norwegian Sea; Greenland Sea; rifting; tectonics 860
North Pacific, NE; Juan de Fuca Ridge, Cleft segment geology; lava, recent flows; hydrothermal plumes, mega- 873
dependence of seafloor roughness on spreading rate 1488
system evolution; Tertiary, Late; California, off, between the Mendocino and Murray fracture zones; tectonics 2132
squall lines
Taiwan Strait, over; numerical study 2540
subtropical; Taiwan Strait, over; numerical simulation 2543
squalls (More at WINDS ...)
squid
resources; Japan, in; cuttlefish, resources 1735
stable isotope analysis
coral reefs, histories; biota, giant clams, corals, calcareous algae as recorders 1372
standard reference materials
analytical chemistry; materials and methods 2973
standard seawater (More at SEAWATER ...)
recent batch comparison 2975
standard water (More at WATER ...)
standards: frequency
time standards; special issue 2387
standards: time
frequency standards; special issue 2387
standing waves (More at WAVES ...)
starvation: anaerobic
survival; bacteria, marine 2736
states: atoll
future of; climate change; sea level, rising 1737
statistical analysis
computer technology, computational; data, analysis, manipulation 575
methods; environmental science; conference; 20 papers ... 1052
education; sampling, resampling; attempts to reform the introductory college course; report 1111
avoiding pitfalls 2851
statistical design
framework for enhancing; environmental research 1051
steranes
3-beta-ethyl, identification and significance; sediments; petroleum 796
sterenes (More at ORGANIC COMPOUNDS ...)
sterols (More at ORGANIC COMPOUNDS ...)
stochastic processes
Kolmogorov; A. N.; turbulence; special issue celebrating his work; 16 papers 726
Stokes drift
wave flumes, in 1178
Stokes waves (More at WAVES ...)
wavetrains; 4th-order nonlinear evolution equation in deep water 2431
Stomatolepas
redescribed; Brazil; Cirripedia; Coronuloidea, from the coast 2296
Stomatopoda
35 spp., with list of spp. from below 400 m; World Ocean; *Galathea* expedition collection 1950-1952 2814
mantis shrimp; compound eyes, structure; light, polarized, detection 2815
mantis shrimp; pigments, color; vision, polychromatic; compound eyes, structure 2816
Persian Gulf; Manningia, new 3190
Stoneley waves (More at WAVES ...)
storm<s> (See also cyclones, hurricanes, typhoons ...)
storm forecasting
landfall and structure; tropical cyclones; model sensitivity to soil moisture parameterizations 761
storm microseisms
and infrasonic; typhoons, movement, occurring with 1934
heat budget, role in 1935
storm surges
East China Sea; tides; interaction; in Chinese, English abstract 52
wind stress, symmetrical 54
Japan, around; typhoons, induced by; in Japanese, English abstract 1184
extreme; Adriatic Sea, N; sea level, time variations, effects . 1833
Korea, seas around 2442
storm tracks
Southern Hemisphere 2547
storm waves (More at WAVES ...)
South China Sea; typhoons; in Chinese, English abstract .. 53
Bengal; Bay of; Arabian Sea; cyclonic model 2449
storms
severe; Newfoundland, 12 September 1775; research confirms storm, not earthquake 1108
eddy energy budget; Southern Hemisphere; atmospheric waves; life cycle of a cyclone wave 1925

storms: tropical
formation; baroclinic instability 759
strait flow
Mediterranean Sea; Otranto Strait; water masses 1805
straits (More at COASTS, ISLANDS ...)
internal tides; modelling stationary internal disturbances 75
flow, recent progress in dynamics studies; U.S. report to IUGG 635
East River; currents, subtidal Eulerian 654
through; East China Sea; volume transport 2418
wide, coastal; eddies, residual dynamics; tidal stress, Lagrangian 2941
strange attractors
plankton, dynamics; chaos theory 2340
stratification (More at FLUID DYNAMICS, SEDIMENTS ...)
Europe, NW; shelf seas 10
effects of; shear layers, secondary instability 109
model; freshwater runoff 115
fluid dynamics; gravitational instability; embedded layer of low-viscosity fluid 123
deep-water representations; circulation modelling 1771
stratification: density
Japan, Hiuchi-Nada; roles of horizontal processes in formation 1886
stratified currents (More at CURRENTS ...)
stratified ecosystems
shallow; Mediterranean Sea, Iroise Sea; nutrients; productivity 436
stratified flow (More at FLOW ...)
ridges, intersecting coasts, over 1887
stratified fluids
thermal fronts, evolution; dependence on initial conditions .. 116
topography, flow over; waves, finite-amplitude, resonant generation of 689
in; vortex waves, solitary 1226
vortical lenses; fluid dynamics; lab investigations 1234
internal waves, spatial structure 1840
stably-; intrusions, structure of the head zone 1875
internal waves; Green's function and point sources 2454
stratified ocean
Rossby waves; analysis 1182
stratified shear flow
stability 1891
stratosphere (More at ATMOSPHERE ...)
radiation, processes; photochemistry; interactions 159
stratospheric ozone
hole; algae, UV-absorbing substance, correlation with 536
stratospheric winds (More at WINDS ...)
stratus clouds (More at CLOUDS ...)
near; cloud condensation nuclei 2532
streams
inversion, piracy; Maryland, eastern shore; estuarine erosion 263
stress
tolerance, and interference by life history strategy; Java Sea; Scleractinia; Fungiidae; coral bleaching 1639
indices; Bivalvia; Mytilus, edulis; biomonitoring 2336
stromatolites
heliotropism; plate tectonics, reconstructions 317
cyanobacterial mats; biofilms; geophysiology 2833
Strongylocentrotus
franciscanus; kelp communities, long-term stability; sea urchins; El Niño, ENSO events; relationships 2714
strontium
isotopic variation; Eniwetok Atoll; carbonate sediments, shallow-water; stratigraphic, chronostratigraphic, eustatic implications 841
isotopes; Cretaceous-Tertiary boundary; seawater 1434
oceanic cycle and labile phases; sampling, sediment trap method for acantharians 2987
structural geology
computer software; microcomputer techniques and applications 1999
structure (See also fine-, horizontal-, micro- and vertical structure; More at ATMOSPHERE, LITHOSPHERE, OCEAN, SEDIMENTS; FRONTS, GRADIENTS, INTERFACES, LAYERS, ZONES ...)
structures (See also beams, breakwaters, offshore-, pipelines, revetments, rigs, PLATFORMS, SEDIMENTARY STRUCTURES; more at INDUSTRY, POWER ...)
student research
projects; Hawaii; reef ecosystems; 12 papers 1047
stygofauna
Canary Islands, W, interstitial waters; Amphipoda; Bogidiella, (Stygogidiella) atlantica n.sp. 2289
subducted lithosphere
thermal structure; seismicity, deep; earthquakes 1527
North Pacific, W; seismic tomography, imaging; island arcs, beneath 1559
Pacific; Tonga, slab, geometry and extent; tectonics 885
seismic imaging; trade-offs with deep path and near-receiver effects 902
subducting plates
above; lithosphere; seismic anisotropy 903
subducting slabs
deep structure; lithosphere; mantle, penetration into; earthquakes, S-wave analysis 1523
Pacific; Alaska, S, beneath; seismic tomography 1534
subduction (More at PLATE TECTONICS ...)
and eduction; continental crust; collision tectonics; model 398
Aegean Sea; Mediterranean area; tectonics, active 865
cyclic character; mantle, upper, buried in; lithospheric plates, paleoplates; tectonics 888
active margins; accretion tectonics 1494
of sediment layers; Kurile Islands; Kamchatka; lava, Be-10 levels 1507
relation to; Ryukyu Arc, and Trench, beneath; seafloor; electrical conductivity; crust 1552
Mesozoic, accretionary complex, example; Japan; seamounts; melanges, large-scale formation 3090
subduction zones (More at LITHOSPHERE ...)
Japan Arc, NE; magnetic data, modelled 340
Andes Mountains, central; crustal deformation; flow model derivations 373
Indonesia, Muriah, evidence from; magmagenesis, potassic alkaline; volcanism; interplay of subduction zone and intraplate processes 380
Pacific, western rim; lithosphere, 3-D configuration 401
earthquakes, great, occurrence and recurrence; simplified slab pull model 419
Chile, along; earthquakes, seismic coupling 421
oblique, lateral displacements in; accretion tectonics; coastwise transport reconsidered 1486
sea level, rise, separation of causes; crustal deformation; determining secular variation 1822
Lau Basin, beneath; seismic waves; mantle; P-wave velocity anomalies 2149
beneath; Tonga Trench; seismic waves, source radiation patterns; crust, structure, constraints on 2179
spreading centers, Antarctic-Phoenix; trenches; ridges, crests; effects of interactions 2628
above; Bay of Islands; ophiolites, formation; geochemical evidence 2641
New Hebrides Arc, (Vanuatu), central; seismic waves, *P* velocity structures 2652
Mexico; earthquakes; plate motions; tectonics, implications 3126
sublittoral zoobenthos
Antarctica; Amphipoda 2813
Submarine Automatic Remote Television Inspection Equipment (Use SMARTIE)
submarine canyons
Spain, NE coast; coastal flow, modification 14
development; Izu-Bonin Arc, forearc; Aoga Shima Canyon 2019
submarine caves
sediments; organic matter, composition, fate 1346
oxygen, benthic, uptake; carbon, cycling; effect of aphotic and resource-limiting conditions 1637
submarine flowslides
turbidity currents; physics, modelling 272
submarine lava
sulfur, low content; volcanism, subaerial, unreliable indicator of 377
degassing history; Hawaii; Kilauea 379
submarine valleys
Mediterranean Sea, Gulf of Lion and Ebro continental margins; depositional environments 242
submarine volcanism
Mexico, off Acapulco; mid-ocean ridges; benthic fauna seared by eruptions; report 3261
submarine volcanoes
tiltmeters; ocean bottom monitoring 390
submarine weathering (More at erosion, weathering ...)
submarines
ships; magnetohydrodynamic thrusters; propulsion, systems; theory, pros and cons 1079

submerged macrophytes
ecology; collection; 11 papers 1019
submerged reefs
relict; Holocene, Early; Atlantic, W 2592
submergence
sudden, probably coseismic; Holocene, 3 events; Washington State 308
submersibles (More at VESSELS ...)
subsidence
Mexico; Gulf of, N; sea level, rise; tides, gauge records 1909-1988 261
subsidence: basin
Pacific, W; seafloor, flattening; long-wavelength residual topography, interpretations 881
Tyrrhenian Sea, opening, postulated mechanism; tectonics . 1485
Pliocene, to Quaternary; North Sea, S; lithosphere, dynamics 1535
Skagerrak; Scandinavia; tectonics 1546
subsidence: geoid
postglacial; equatorial zone, oceans, over; new spectral formalisms 2623
substrates
concentration; Newfoundland; bacteria, responses; temperature; plankton blooms, spring 2261
characteristics, relationship to; Argentina, Santa Elena shoal; intertidal zone; endolithic fauna 2704
substrates: artificial
plastic litter, marine 551
subtidal communities
rocky; benthic fauna; predator-prey interactions 472
rocky coast; France, W Brittany; factorial analysis in ecology . 969
subtropic<s> (More at tropics ...)
subtropical gyres
South Atlantic, E; eddy, deep-reaching, anticyclonic 659
North Pacific, central gyre; primary production 934
succession
Japan, Nabeta Bay; sessile biota; community structure, temporal changes in 974
succession: community
phytoplankton; convergence in microcosms using different inoculum species composition 951
South Africa, E Cape shore; intertidal macroalgae 2715
Fucus, canopy; ice scours, massive, following; Mytilus 3168
succession: plankton
aquaculture, marine basins for larval fish rearing; fish 1607
suction waves (More at WAVES ...)
Suez Canal
as conduit; Red Sea; Mediterranean Sea; Lessepsian migration; biogeography, continuous process 2667
Sulawesi
NE; Quaternary; lava, geochemistry; magma, source chemistry; volcanic rocks 392
sulfate aerosols
natural marine; dimethylsulfide, from phytoplankton; geophysiology 768
Pacific, over; atmospheric particulates 2550
Pacific, over; geographic, temporal variations 2552
sulfates
reduction; mangrove swamps; benthic metabolism 493
non-sea-salt, and methanesulfonic acid; World Ocean, over; atmospheric aerosols 1301
sulfide deposits
pelagic; Mid-Atlantic Ridge, along, adjacent to; patterns of distribution, mantle spicule theory 1391
sulfides
massive, radial growth rates and Pb-210 ages; Juan de Fuca Ridge; hydrothermal deposits 1411
North Atlantic, W; radon; atmosphere; seawater 1936
biological tolerance of; sediments; vent communities; macrofauna 2207
iron, solubility; temperature, ambient; natural waters, and synthetic 2560
gradient, novel strategy; Nematoda; chemoautotrophic ectosymbionts 2712
sulfur
World Ocean; carbon; oxygen; interrelationship between temporal trends in isotopic curves 220
low content; submarine lava; volcanism, subaerial, unreliable indicator of 377
nutrients, status; carbon; nitrogen; sediments, recorded in 1330
Black Sea, geochemical relationships; sediments; carbon, organic; iron 1387
elemental; atmosphere, in; origins explored 1937
North Atlantic, W, over; dimethylsulfide, emissions, seasonal variations; nitrogen; atmospheric chemistry . 1938
inorganic speciation; anoxic sediments, hypersaline 2057
reduced, variability; marsh sediments, salt; pore water, parameters 2594
metabolism; anoxic sediments; cyanobacteria, mat-building 2773
elemental; chemical analysis 2970
particulates; carbon; nitrogen; determinations 2995
determinations; particulates 3016
sulfur cycle
global model; troposphere 2548
sulfur cycle: atmospheric
global; 3-D modelling 766
Sulu Sea
internal swash; solitary waves, associated with 698
Sumatra
arc tectonics; crustal deformation; plate motions 1539
Sumisu Rift
structural development; Izu-Bonin Arc; arc tectonics 1557
sun
role; climate; global warming; report 2384
sunglint
surface; remote sensing, AVHRR observations 1213
sunlight (More at LIGHT ...)
supernatant water (More at WATER ...)
surf (More at COASTS, WAVES ...)
surf zone (More at COASTS, ZONES ...)
surface (See also sea- and ocean surface; more at OCEAN ...)
wind stress; wind waves; relationships 72
rough, excited from above and below; acoustic backscattering 83
layer; acoustic waveguides; transmission techniques 84
irradiance, net solar; climate, variability, and 1982-83 El Niño; global monitoring 127
waters; North Sea, Dogger Bank area; trace metals, dissolved and particulate 229
sunglint; remote sensing, AVHRR observations 1213
from; acoustic scattering; spatial covariance and adaptive beamforming 1220
from; radiation, upward, angular dependence of polarization . 1260
at; internal waves, manifestations; surfactants, presence; films, presence 1842
waters; North Pacific, and adjacent seas; lipids, dissolved and suspended 1971
Earth, interaction with; mantle plumes, heads; volcanism, flood basalt; onset of small-scale convection 2158
range measurements; radar altimetry; frequency dependence of electromagnetic bias 2407
air-sea interactions; wind; stability dependence of the drag and bulk transfer coefficients 2519
radiation, fluxes; retrieval from satellite data 2949
fluxes; air-sea interface; heat flux, turbulent, and moisture and buoyancy; wind, low speeds 2954
surface boundary layer (More at BOUNDARY LAYERS ...)
observations; model output to monitor data quality 732
surface circulation (More at CIRCULATION ...)
surface cooling
abrupt, evidence for; Oligocene, Earliest; Southern Ocean . 844
surface currents (More at CURRENTS ...)
surface drift (More at DRIFT ...)
surface films (More at films ...)
surface: fractal
roughness; remote sensing; signal processing 2390
surface heat
balance; Pacific, W equatorial; in Chinese, English abstract .. 7
surface heat flux
Pacific, W equatorial; wind, westerly bursts 138
Kuroshio, influence of; China; Chang Jiang River, region; rainfall, meiyu 2509
surface height
mean; Bermuda, from; Cape Cod, to; geoid; satellite data . 2622
surface intrusions (More at INTRUSIONS ...)
surface jets (More at JETS ...)
surface layer (More at LAYERS ...)
Pacific, equatorial, along 135°N; particulates; organic matter; chlorophyll 207
seawater; ions, fractionation 1955
surface microlayer
air-sea interface; carbon dioxide, production; in French, English abstract 198

bacteriology, quantitative and qualitative; sewage pollution 2330
glucose, uptake; carbon dioxide, production; radiation, UV and visible, influence of 2728
surface mixed layer
turbulence; wind, mixing; effect of horizontal buoyancy gradient on energy budget 113
surface moisture
North Sea, Jade region; sand flats; pore water; salinity; in German, English abstract 192
surface: neutral
analysis; some considerations 2895
surface radiation
budget; remote sensing; satellite retrieval 2499
surface reactivity
particulates; sampling, characterization 2996
surface roughness
wave scattering 1192
waves; stochastic model 2439
microscale, in-situ measurements; sea ice 2931
surface salinity
Pleistocene, during last glacial maximum; North Atlantic 1424
Pacific, tropical; seasonal, interannual variations 2976
surface slicks
wind, speed, relation to; occurrence frequencies 1884
surface slope
frequency spectra; Caspian Sea; waves 1180
surface temperature (More at TEMPERATURE ...)
Pacific, W tropical, over; atmospheric convection; water vapor; relationships 139
North Pacific; atmospheric waves, PNA; interactions 142
Pacific, tropical; atmospheric circulation, response; ocean-atmosphere interactions 143
sensitivity to; Northern Hemisphere; atmospheric circulation 144
response; greenhouse gases; some updated statistical assessments 145
clouds, cirrus; remote sensing, measurements, influences on 153
Atlantic, tropical, 20°N-20°S; thermocline, depth; relationship at annual, interannual time scales 626
Atlantic, tropical; climate, indices; applications 630
tropical; carbon dioxide, changes; paleoclimate; relationships 738
California, central, off; thermal patchiness; patchiness during a wind relaxation event 747
cloudiness; radiation, solar; recent interannual variations 1254
monsoon rainfall, Indian; Southern Oscillation, and 500 mb ridge position in April; relationships 1281
remote sensing; variability consequences for validation and application of measurements 1762
North Pacific; seasonal fluctuations in the open ocean 1766
wind, mean; errors due to inadequate sampling 1896
Pacific, W tropical; air-sea interactions; circulation, general; large-scale interannual and intraseasonal interactions 1912
variability; California; Gulf of; ocean-atmosphere interactions; tidal and atmospheric forcing of the upper ocean 1915
inhomogeneous field; clouds, boundary-layer, breakup 1930
Pliocene, during; North Atlantic 2090
satellite data, SMMR 2391
satellite and buoy data compared 2393
satellite-derived global fields 2395
effects of; Atlantic, tropical; freshwater flux, seasonal 2396
remote sensing, polar satellite AVHRR data, from 2397
analyses from in-situ and satellite data 2398
multichannel, product quality; climate monitoring 2491
India, over; monsoons, SW, during the course of 2517
Mexico; Gulf of; phytoplankton, concentration; seasonal variations, satellite observations 2885
anomalies; heat, and water budgets; circulation, GCM response 2953
anomalies; North Atlantic, tropical, subtropical; atmospheric pressure, variations; relations 2955
response; El Niño, 1986-87 ENSO; ocean-atmosphere interactions 2956
Norway; remote sensing; aquaculture, planning, for 3252
surface tension
effects; waves, progressive, due to incomplete wavemakers (barriers) 2444
surface water fluxes
changes in; deep circulation, rapid transitions; relationship 17
surface waves (More at WAVES ...)
description in basin of variable depth 57
over rotating fluids; fluid dynamics 66
wave heights; 2-D spectra based on aerial survey data 1823
surface wind
South Africa; Algoa Bay, over 753
distribution; North Carolina; South Carolina; hurricanes, Hugo, landfall 1292
surfactants
presence; waves, weakly nonlinear, evolution; viscosity, presence 690
as coating; air-water interface; moisture, distribution above 1283
presence; internal waves, manifestations; surface, at; films, presence 1842
synthetic, and biosurfactants; toxicity testing; microbiota 2845
surfactants: biogenic
microbiota, from; petroleum biodegradation, bacteria 2769
surge<s> (More at WAVES ...)
surges: storm
East China Sea; tides; interaction; in Chinese, English abstract 52
wind stress, symmetrical 54
Japan, around; typhoons, induced by; in Japanese, English abstract 1184
extreme; Adriatic Sea, N; sea level, time variations, effects 1833
Korea, seas around 2442
Suruga Bay
photographic observations; Japan; Ophiuroidea, deep-sea infaunal 465
Suruga Trough
Japan; turbidite sediments; variations in C-14 ages of organic fractions 295
surveying
history of 1743
surveys: bathymetric
systems; quantitative comparison of Deep-Tow, Sea Beam, and SeaMARC II data 813
surveys: geochemical
Adriatic Sea; Trieste; Gulf of 1390
surveys: geodetic
need for; Indian Plate; plate motions, constraining 1482
surveys: geothermal
temperature, gradients; sediments 2120
surveys: hydrographic
Philippine Sea, deep structure 38
North Pacific; gyres, subtropical, along 24°N 629
depth data; assessing data precision 1056
current meters, acoustic Doppler; use in mesoscale surveys 1149
Korea, off; Ulleung Basin; physical properties 2422
surveys: hydrophysical
Atlantic; mesostructure 6
Kamchatka, SW shelf 1276
surveys: magnetic
Iceland 1461
Nigeria; Benue Trough, Abakaliki anticlinorium 1466
surveys: oceanographic
India, E, off; 1960 literature survey translated 2394
surveys: seismic
Mediterranean Sea; MedNet broad-band network 234
OBS applications; in Japanese, English abstract 236
deep; Baltic Sea, S, Tornquist Zone; crust, structure 1511
shooting direction, a design issue 2001
refraction; seabed; technique using bottom shots 2003
data acquisition 2009
future; Ocean Seismographic Network, site preparation; seafloor; ODP Leg 136 initial report 2862
Costa Rica, accretionary prism; field program and migration examples 3128
survival
rate; natality; growth, rate; recruitment; relationships 2205
anaerobic starvation; bacteria, marine 2736
suspended detritus
Arabian Sea; energy content 2576
suspended matter (More at PARTICULATE MATTER ...)
distribution; Netherlands; coastal zone 790
in; China; Chang Jiang Estuary; hydrocarbons, non-aromatic; characterization, intraannual variations 807
particles, size, concentration; reflectance, measurements, effects on 1335
sorption capacity; absorption, isotherm equations 1338
Pacific, deep water; calcite, sources and transport 1977
size fractions; phosphorus, distribution, in waters of different trophicity 1981

sediment transport, suspended; nonequilibrium, simple model 2028
at base of water column, composition and distribution; Black Sea, NW; sedimentation 2059
in bottom waters; East Pacific Rise; metals; hydrothermal vents, high-temperature 2076
biogenic silica; sediments 2997
particulates, collection for trace analysis; pumps, in-situ 3022
and sinking; North Atlantic, N; particulates; sampling and analysis 3027
particulates, sampling and analysis 3032
suspended sediments (More at SEDIMENTS ...)
resuspended; observations at 200-m depths; in French, English abstract 211
Amazon River, shelf 214
concentrations; acoustic backscattering 215
Delaware Estuary; phosphorus, particle-bound 2577
suspension feeders: benthic
kelp communities; macrophytes, canopies, beneath; effects of understory kelps on faunal growth rates and survival 1635
Susquehanna River
Conowingo Reservoir; sediments, accumulation rates; radionuclides, as rate trackers 271
sustainable biosphere
initiative; an ecological research agenda 602
sustainable economy
industrial greening; making the transition 1087
Svalbard
margin; Barents Sea; continent-ocean boundaries; crust, deep seismic transects across 1521
Sverdrup transport
Florida Current, sources; currents 663
swamps: mangrove
benthic metabolism; sulfates, reduction 493
bacteria, S-reducing; ecology, physiology 496
Swartkops Estuary
Ems Estuary; Chesapeake Bay; Baltic Sea; Peruvian Upwelling; Benguela Upwelling; ecosystems marine; ecology, comparative 918
swash (More at WAVES ...)
swash: internal
Sulu Sea; solitary waves, associated with 698
swash zone (More at COASTS, ZONES ...)
and effluent line, dynamics; beaches, sandy; shoreline dynamics 2026
Sweden
Gullmarfjord; Crustacea, hyperbenthic; benthic fauna 506
Oresund; Fucus, vesiculosus; radionuclides, seasonal variation 1029
Baltic Sea, coast; organochlorines, dioxins, dibenzofurans; aromatic hydrocarbons; atmosphere, in 1947
Gullmar Fjord Basin; Nematoda, changes and slow recovery of assemblage; hypoxic water, episode 2706
Laholm Bay; groundwater discharges, submarine 3067
swell (More at WAVES ...)
wind waves; pressure, measurements just above the water 1176
effects on imaging; wind waves, directionality 1834
swells: lithospheric
South Pacific, superswell; lithospheric heat flow, constraints 1475
Sydney
area offshore; Australia; silicones, polyorganosiloxanes; pollution 799
symbiosis (More at ECOLOGY ...)
Synidotea
laevidorsalis, global invasion by; Isopoda; introduced species, test of criteria 1004
systematics: biochemical
fossil record, biomolecules; molecular paleontology 2386
Systeme Probatoire d'observation de la Terre (Use SPOT)

tagging
implanted sonar transponder and radio tags; Cetacea; whales, reaction 2701
Tahiti
Gnathostomulida 2272
Taiwan
N of; Kuroshio, branch current; currents 24
N of, in winter; thermohaline fronts 39
off, Tainan Basin; tectonics; crust, structure; basin sediments, stratigraphy 241
SE, off; collision tectonics; ridges; troughs 3087
Taiwan Strait
central and northern; sediments, distribution characteristics in; carbon, organic; nitrogen, total; phosphorus, total; in Chinese, English abstract 288
over; squall lines; numerical study 2540
over; squall lines, subtropical; numerical simulation 2543
Talitrus
saltator (British sandhoppers); Decapoda; solar orientation 2822
Tamar Estuary
U.K.; metals, Ni, Sb, Se, Sn, U, V; electrochemical study 1313
U.K.; tin; tributyltin, concentrations; effectiveness of legislation and improved dockyard practices 3245
tanker<s> (More at VESSELS ...)
tankers
operational discharges from; North Sea, concentrations in; chemical pollution 2358
tanks (See also flow-through systems, flumes, chambers ...)
taphonomy
deep-water; California; Santa Catalina Basin, bathyal; vertebrate carcasses, a whale skeleton 846
taphrogenesis
and dispersion; Mesozoic, -Cenozoic; China, SE, fault-sag zones; marginal seas 3091
tar (More at PETROLEUM ...)
Oman; beaches 2355
Tasmania
S; Mysidacea, leptomysinid; Antichthomysis, notidana n.gen., n.sp. 3186
teaching: science
education; a holistic approach 1744
technology: computer
computational; statistical analysis; data, analysis, manipulation 575
geoscience data; a new approach 1360
neural networks 1719
technology: network
communications; computers 2344
technology: offshore
ocean engineering; instrumentation; overview articles; 11 papers 1077
technology transfer (More at DEVELOPING COUNTRIES ...)
technology: undersea
robotics; remotely operated vehicles, submarine; applications 1078
tectonic<s> (See also expanding Earth theory, isostasy, polar wander, rhegmatism, undation theory; more at EARTH, LITHOSPHERE ...)
tectonic stress waves
global; propagation between 1978 and 1983 2141
tectonic zones (More at LITHOSPHERE ...)
tectonics
Taiwan, off, Tainan Basin; crust, structure; basin sediments, stratigraphy 241
history; Caribbean area; pelagic sediments 310
Neogene; Mediterranean Sea, W; paleogeography; problems of palinspastic reconstruction; 12 papers 312
block rotation; Ethiopia, Afar; continental lithosphere, extension; comparison to oceanic microplate systems 348
features; Mid-Atlantic Ridge; isostasy, compensation 351
transport, alternatives to; California, coastal; Baja California; paleomagnetism 352
Holocene; Cuba, W 354
extensional; Quaternary; Greece, S Evvoikos Gulf; sea level, changes 356
early stages of Red Sea opening; Saudi Arabia, Aznam Trough; basalts, high-Ti tholeiites; rifting, abortive 359
geodynamic reconstructions; Lias, to present; Caribbean Sea; crust 371
block rotation; crustal deformation 416
aspects; margin sediments; oil, and gas accumulation 423
Mariana Arc, forearc; North Pacific, W; crustal accretion 839
Neogene, development of the restraining-bend complex; Caribbean Sea, Swan Islands; fault zones 840
Norwegian Sea; Greenland Sea; rifting; seafloor spreading, asymmetric 860
microplate; paleomagnetism; U.S. report to IUGG 862
development; Australia, off; Exmouth Plateau; continent-ocean boundaries; transform margins 863

implications for; Pleistocene, Late; Holocene; Japan; sea level, changes; mantle rheology 864
active; Aegean Sea; Mediterranean area; subduction ... 865
Bering Sea, history; sedimentary basins 866
Mediterranean Sea, geodynamics; lithosphere, basal detachment; mantle, eastward flow 882
Pacific; Tonga, slab, geometry and extent; subducting lithosphere 885
mantle, upper, buried in; lithospheric plates, paleoplates; subduction, cyclic character 888
Barbados, evolution; Caribbean Sea; hydrocarbons, evolution; accretionary terranes 912
and magmatism, relation to; East Pacific Rise; hydrothermal vents, distribution; mid-ocean ridges 1410
Miocene, Early; Japan; Sea of, opening, implications for; paleomagnetism, in the Kani group in SW Japan 1457
implications; Japan, region; magnetic field, anomalies, map 1458
Japan; Sea of, implications for the opening mode; Tsushima Strait, area; paleomagnetism, and fission track geochronology 1460
Kamchatka Peninsula, off, Karaginskiy Island 1479
Neogene, to Quaternary; North Atlantic; Gorringe Bank; crustal deformation 1483
Tyrrhenian Sea, opening, postulated mechanism; basin subsidence 1485
strike-slip; transcurrent faulting; workshop papers 1487
Philippine Sea Plate; plate motions; VLBI measurements . 1491
Cenozoic; Atlantic; Sierra Leone Rise; lamprophyric volcanism; implications for regional tectonics and stratigraphic time scale 1499
Aleutian Arc, geology, evolution; magmatism 1506
present; Iceland; earthquakes; hotspots; plate boundaries 1519
mantle, structure, dynamics; symposium 1545
Skagerrak; Scandinavia; basin subsidence 1546
and geological structure; North Atlantic; Gorringe Ridge; surveys, analysis 1561
evolution, key to reconstruction; Pleistocene; Bannock Basin; Mediterranean Sea; sediments, facies analysis 2064
responses to; Caribbean Sea; carbonate platforms, retreat 2100
Quaternary, Late; Canada, W; shelf sediments; glacial troughs 2126
implications; Izu Peninsula, in and around; seismicity; volcanism 2127
Tertiary; Caribbean Sea; Hispaniola; neotectonics; fault zones, Trans-Haitian 2128
Tertiary, Late; California, off, between the Mendocino and Murray fracture zones; seafloor spreading, system evolution 2132
lithospheric stress, sources of 2133
Antarctica, West; Weddell Sea, opening; paleomagnetism, Thurston Island; magnetic field 2134
rotations; Paleozoic, Late; South America; plate motions; paleomagnetism 2139
lithospheric stress, from sublithospheric loading; plate boundaries, forces 2150
crust; thrust-induced layering 2169
earth tides; tides as tectonic pump and vibrator 2171
lithospheric stress, nature, source, magnitude 2178
lithospheric stress, thermoelastic; hotspots, reheating, due to 2183
Eocene; South Pacific, W, and Nazca Plate; propagating rifts 2625
deep seismic reflection data; Maine; Gulf of; Fundy; Bay of; Appalachian Mountains, N, implications for 2626
lithospheric breakup; plates, work-hardening plastic, necking; rifting 2627
South China Sea, Zengmu Basin; sediments; in Chinese, English abstract 3089
Juan de Fuca Ridge; Cobb Offset; rifting, propagation history, constraints on 3092
rifting, and rift systems, global; spreading centers; structural forms and processes, symposium papers 3094
North Fiji Basin; Pacific; magmagenesis 3108
implications; Mexico; subduction zones; earthquakes; plate motions 3126
Middle America Trench; seismicity, synthetic model; faults, interactions with 3130

tectonics: accretion
continents, growth; margin, dynamics, terranes; ACCRETE workshop steering committee reports 360
subduction zones, oblique, lateral displacements in; coastwise transport reconsidered 1486
active margins; subduction 1494
Southeast Indian Ridge; periodicity in the accretion process 2129

tectonics: accretionary
continents; symposium papers 3095

tectonics: arc
Mediterranean Sea; Hellenic Arc, and Cyprus Arc 349
Mesozoic, Mid, the Gravina sequence; Alaska, SE 900
Sumatra; crustal deformation; plate motions 1539
Vanuatu; seismicity 1540
Izu-Bonin Arc; Sumisu Rift, structural development 1557
Ryukyu-Kyushu Arc; North Pacific, NW; earthquakes; plate boundaries, thermomechanical state 3119

tectonics: collision
Asia, SE; Indonesia; regional evolution since 43 Ma 367
continental crust; subduction, and eduction; model 398
material transfer in an arc-ridge collision zone 1484
New Hebrides Arc, (Vanuatu); South Pacific, W; accretionary wedges; guyots, Bougainville Guyot; structure of the arc-guyot collision zone 2123
Papua New Guinea; Solomon Sea; collision propagation . 2130
crust, flexural extension in foredeeps 2151
Taiwan, SE, off; ridges; troughs 3087

tectonics: extensional
Neogene; Greece, Megara Basin; sedimentary basins; tectono-sedimentary development 1418
mechanism; crust, structure; gravity field, anomalies, constraints from 2122

tectonics: margin
orogenesis, processes; review 362
India, northern; multicyclic history 861
forearc processes; U.S. report to IUGG 870
recent; Italy; Messina; Strait of 2125

tectonics: plate
reconstructions; stromatolites; heliotropism 317
crustal deformation; conference papers; 17 papers, 29 selected abstracts 361
kinematic models; North American Plate; Caribbean Plate; plate boundary zone 363
Jurassic, Late, since; South Atlantic, evolution 365
Cenozoic; Pacific, W; Tethys; paleogeodynamic maps 366
North American Plate; deformation, dynamics 368
Indian Plate; Australian Plate; relative motions last 20 Myr 369
Gondwana, reconstruction; India, S; Antarctica, E 370
change in activity over the past 150 Myr 374
Antarctic Ice Sheet; Gondwana, break-up, possible trigger for 429
Tertiary, Mid-; North American Cordillera; magmatism; 29 papers 856
seismotectonics; U.S. report to IUGG 890
sea level, short-lived global fluctuations; epeirogeny; relationships 1422
North American Plate, active fragmentation; Mexico, off Manzanillo; triple junctions 1478
reflections of the past two decades 1490
Azores Triple Junction, evolution 1492
mantle plumes, starting; continents, breakup, role in 1528
delayed discovery?; lithospheric heat flow, misconceptions . 1742
driving forces, constraints 2135
kinetic energy, equipartition 2137

tectonophysics
1987-1990; plate motions; U.S. report to IUGG 868

tectosphere (More at EARTH ...)

tektites (See also microtektites; more at SILICATES ...)
Cretaceous-Tertiary boundary; Haiti; impact hypothesis, bearing on 2609

telemetry (See also biotelemetry; more at COMMUNICATIONS ...)

telemetry: acoustic
16 papers 86

telemetry: data
ocean; sensors, underwater; new methods for real-time observations 1054
instrumentation, systems; recent developments at Woods Hole Oceanographic Institution 1715
long-range; instrumentation, packages; frequency-agile HF packet-switching protocols 2893

Teleostei
flatfish, ecology; symposium proceedings 1623

telephone cables (More at CABLES, COMMUNICATIONS ...)

television (More at COMMUNICATIONS ...)

TEM (More at MICROSCOPY ...)

temperature (More at HEAT ...)
monthly mean; France; Biscay: Bay of; in French, English abstract ... 3
surface and bottom; Europe, NW; shelf seas ... 4
tolerance; Antarctica; algal metabolism, DMSP; salinity, tolerance; ecophysiological investigations; in German, English abstract ... 532
Europe, NW; shelf seas; thermocline, depths ... 624
anomalies; North Pacific; Axial Seamount, June 1988; acoustics, a search for signals ... 718
Cenozoic, Late; climate change; paleoclimate; carbon dioxide, dynamics; ice, global mass; first-order global model ... 741
currents; correlation ... 1141
thermohaline staircases; salinity; density; fluxes across the interface ... 1227
stable oxygen isotope record; Bivalvia; Tridacna, gigas shells, correlation in; light, attenuation profiles ... 1375
Atlantic, 30°S to 77°N; salinity; flow, fields ... 1769
effects; bubbles, generation, entrainment; breaking waves ... 1877
dynamic response to; pressure sensors, CTD ... 1951
gradients; sediments; geothermal surveys ... 2120
Newfoundland; bacteria, responses; substrates, concentration; plankton blooms, spring ... 2261
variations; Korea, South Sea; seawater; currents; in In Korean, English abstract ... 2403
variability; California; Gulf of; El Niño, recent, strong; sediment diatom record ... 2512
ambient; sulfides, iron, solubility; natural waters, and synthetic ... 2560
as function of; seawater, and distilled water; hexachlorocyclohexanes, Henry's Law constants ... 2585
time series; hydrothermal vents, 3 sites ... 2602
effects; enzymes, extracellular; microbial metabolites; polar seas, in ... 2779
and depth corrections; expendable instrumentation ... 3228

temperature: air
surface; Northern Hemisphere; observed records compared 735
seasonal; Antarctica, around; sea ice, variations; relationships 748
atmospheric monitoring; remote sensing; microwave temperature sounders compared ... 2492

temperature: atmospheric
surface; greenhouse gases; analysis of changes 1890-1985 ... 1268
climatic databases, ATMOES; satellites, operational environmental ... 2861

temperature: bottom
Newfoundland, off; Grand Bank; implications for exchange rates ... 627

temperature fronts (More at FRONTS ...)
marine; Greenland Sea; air-sea interactions ... 1917

temperature: global
atmospheric carbon dioxide; silicate weathering, effects of ... 1904
record; climate; do bidecadal oscillations exist in the record? ... 1905
surface; paleogeography; atmospheric carbon dioxide; coupled model with latitudinal contrast ... 2612

temperature: surface
Pacific, W tropical, over; atmospheric convection; water vapor; relationships ... 139
North Pacific; atmospheric waves, PNA; interactions ... 142
Pacific, tropical; atmospheric circulation, response; ocean-atmosphere interactions ... 143
sensitivity to; Northern Hemisphere; atmospheric circulation ... 144
response; greenhouse gases; some updated statistical assessments ... 145
clouds, cirrus; remote sensing, measurements, influences on ... 153
Atlantic, tropical, 20°N-20°S; thermocline, depth; relationship at annual, interannual time scales ... 626
Atlantic, tropical; climate, indices; applications ... 630
tropical; carbon dioxide, changes; paleoclimate; relationships ... 738
California, central, off; thermal patchiness; patchiness during a wind relaxation event ... 747
cloudiness; radiation, solar; recent interannual variations ... 1254
monsoon rainfall, Indian; Southern Oscillation, and 500 mb ridge position in April; relationships ... 1281
remote sensing; variability consequences for validation and application of measurements ... 1762
North Pacific; seasonal fluctuations in the open ocean ... 1766
wind, mean; errors due to inadequate sampling ... 1896
Pacific, W tropical; air-sea interactions; circulation, general; large-scale interannual and intraseasonal interactions ... 1912
variability; California; Gulf of; ocean-atmosphere interactions; tidal and atmospheric forcing of the upper ocean ... 1915
inhomogeneous field; clouds, boundary-layer, breakup ... 1930
Pliocene, during; North Atlantic ... 2090
satellite data, SMMR ... 2391
satellite and buoy data compared ... 2393
satellite-derived global fields ... 2395
effects of; Atlantic, tropical; freshwater flux, seasonal ... 2396
remote sensing, polar satellite AVHRR data, from ... 2397
analyses from in-situ and satellite data ... 2398
multichannel, product quality; climate monitoring ... 2491
India, over; monsoons, SW, during the course of ... 2517
Mexico; Gulf of; phytoplankton, concentration; seasonal variations, satellite observations ... 2885
anomalies; heat, and water budgets; circulation, GCM response ... 2953
anomalies; North Atlantic, tropical, subtropical; atmospheric pressure, variations; relations ... 2955
response; El Niño, 1986-87 ENSO; ocean-atmosphere interactions ... 2956
Norway; remote sensing; aquaculture, planning, for ... 3252

temperature: tropospheric
atmospheric monitoring; remote sensing; precision monitoring 1979-90 ... 2497

Tenerife
and Hierro; Amphipoda; Ingolfiellidea, new species; interstitial fauna ... 2824

tension: surface
effects; waves, progressive, due to incomplete wavemakers (barriers) ... 2444

tephra (More at volcanic ...)
layers; Mediterranean Sea, E; Bannock Basin; sediments 2075

terminology: scientific
planktic et al. vs planktonic et al. ... 2881

terraces: erosion
Mexico; Gulf of; Florida Escarpment ... 1406

terranes: accretionary
Barbados, evolution; Caribbean Sea; tectonics; hydrocarbons, evolution ... 912

terrestrial ecosystems
nitrogen limitation; seawater, ecosystems ... 1976

terrestrial organic matter
coal; petroleum, potential as source rocks for; symposium papers ... 2189

terrigenous deposition
sources; sediments; hydrothermalism, quantifying inputs ... 304

Tertiary
uplift; Europe, U.K., France; shelf sediments; chalk, porosity ... 283
Cretaceous; Africa, off; basin sediments; continental environments ... 319
Mid-; North American Cordillera; magmatism; plate tectonics; 29 papers ... 856
Late; Ireland; Porcupine Basin; sediments, slump structures ... 1397
Texas, Gulf coast, off; clay sediments, isotopic composition variation ... 1403
Japan; Japan; Sea of, opening, in reference to; sedimentary basins, evolution ... 2096
Caribbean Sea; Hispaniola; neotectonics; fault zones, Trans-Haitian; tectonics ... 2128
Late; California, off, between the Mendocino and Murray fracture zones; seafloor spreading, system evolution; tectonics ... 2132

Tethys
Cenozoic; Pacific, W; plate tectonics; paleogeodynamic maps ... 366
and warm transitional waters; Cretaceous, terminal; Foraminifera, planktonic; biogeography, patterns; fossil record ... 2617

Texas
Laguna Madre, hypersaline lagoon; bacterioplankton, abundance and production dynamics; seagrass communities ... 927
Gulf coast, off; Tertiary; clay sediments, isotopic composition variation ... 1403

Thailand: Gulf of
Bivalvia; Perna, viridis, residues in; organochlorine pesticides ... 2847

Thalassia
hemprichii, litter biodegradation: fungal biomass, significance; seagrass detritus 992
testudinum: seagrass biomass, and productivity: nutrients, water column: epiphytes, levels; relationships; field observations 1691
Thalassinidea
Australia, NW, Kimberley region: Anomura: Brachyura: 175 taxa 3191
callianassid: Caribbean Sea, Colombian coast: Lepidophthalmus, sinuensis n.sp.: ecology, impact on commercial culture of penaeids 3224
Thalassiosira
pseudonana: diatoms: photosynthesis, inhibition: radiation, UV, function of dose and dosage rate 2832
thanatocoenoses
modern: California: San Nicolas Island, high-energy coast: fossil record: coastal zone 850
submerged: Pleistocene, last glacial: North Atlantic: fossil record, southward faunal shifts 2110
Tharyx
luticastellus: San Diego Trough, microtopography: California: Harpacticoida, mudballs built by: flow, effects . 2805
Thermaikos: Gulf of
Greece: zooplankton, populations, differentiation: pollution, presence of 2335
thermal (More at HEAT ...)
thermal bars
fluid dynamics: lab studies 1880
thermal currents (More at CURRENTS ...)
thermal diffusivity
thermocline, theory 1883
thermal effluents (More at effuents ...)
thermal fronts
evolution: stratified fluids: dependence on initial conditions . 116
thermal gradients (More at GRADIENTS ...)
thermal patchiness
California, central, off: surface temperature: patchiness during a wind relaxation event 747
thermal pollution (More at POLLUTION ...)
thermal radiation (More at RADIATION ...)
thermistor buoys (More at BUOYS ...)
thermocline (More at GRADIENTS, OCEAN ...)
equations; similarity solutions 114
depths: Europe, NW: shelf seas: temperature 624
depth: Atlantic, tropical, 20°N-20°S: surface temperature: relationship at annual, interannual time scales 626
theory: thermal diffusivity 1883
main, in: turbulence: mixing: heat flux 2476
thermocline: bathyal
Pleistocene, Late: Pacific, W equatorial: water masses, glacial deep-water properties 2094
thermocline: ventilated
mixed layer, role of finite thickness 111
thermocline ventilation
South Pacific: Peru Upwelling, significance 2425
thermohaline circulation
ocean: nonuniqueness 1128
global: multiple equilibria 1781
climate, ocean: role of mixed boundary conditions in models .. 1792
4-D analysis 1813
catastrophic transitions: climate modelling 2400
Weddell Sea, formation of Ice Shelf Water: Filchner-Ronne Ice Shelf, beneath 2458
thermohaline fronts
Taiwan, N of, in winter 39
thermohaline staircase
horizontal propagation mechanism: fluid dynamics 1235
temperature: salinity: density: fluxes across the interface .. 1227
salt fingers, and intrusions: diffusive interfaces 2481
thermohaline structure
Hawaiian Ridge, effects of: North Pacific: flow: circulation 645
thermohydrodynamic monitoring
use of quasi-Lagrangian information 1894
thermoluminescence dating
California, N: coastal sediments 1385
thermoluminescence: sediment
reduction: Quaternary: Spitsbergen: light, intensity and spectra effects; implications for dating sequences 2002
thickening plate theory (More at PLATE TECTONICS ...)
thiols
evidence for biological turnover: anoxic sediments 1982
Third World (More at DEVELOPING COUNTRIES ...)
tholeiites (More at IGNEOUS- ...)
tholeiites: rift
Reykjanes Peninsula: Iceland: magma, primary, petrology 2143
tholeiitic dykes
Indian Ocean: Seychelles, in: Deccan Traps, flood volcanism 2631
thorium
South China Sea, central: sediments: in Chinese, English abstract 195
isotope: Pacific, equatorial and high-latitude sites: particulates, data; generalized scavenging model 2574
-234, particulate and dissolved: chemical analysis, updated determination 2977
thymidine
assimilation patterns: Antarctic Peninsula: Bransfield Strait, region: glutamate, assimilation patterns: phytoplankton blooms, spring 1652
Thysanoessa
macrura: Euphausia, superba: krill, Antarctic, morphological and biochemical differentiation; multivariate approach ... 1675
Tibet
W: Holocene: climate, 13-kyr record: paleoclimate 2093
tidal bedding
and cyclicities: U.K.: Wales, Dyfi Estuary: intertidal sediments 2037
tidal bores: internal
upwelling: larval transport 452
tidal circulation (More at CIRCULATION ...)
tidal currents (More at CURRENTS ...)
M_2: East China Sea, NE: 3-D model 46
M_2: metered observations vs Schwiderski and Laplace models .. 658
migration, vertical: biota 1593
interactions: Georges Bank: North Atlantic: eddy flux, skew eddy fluxes 1804
North Atlantic, eastern basins 2905
South China Sea, N: tides 2909
tidal flats (More at FLATS ...)
Wadden Sea: Brachyura: Carcinus, maenas, abundance after winter 2799
tidal flow
data; estimation of parameters of hydraulic models 680
tidal fronts (More at FRONTS ...)
mixing: North Sea: flow, residual and tidal 2427
tidal gravity
Europe: tides, ocean, loading by 1819
tidal harmonics
Japan: Kagoshima Bay: numerical study 43
tidal hydraulics
Canada: Saint John River 42
tidal inlets
shoreline dynamics: stability studies 2025
tidal power (More at POWER ...)
tidal rhythmites
clastic: sediments: key to history of Earth rotation and lunar orbit 1407
tidal stress
Lagrangian: straits, wide, coastal: eddies, residual dynamics . 2941
tidal transport
long waves, tidal, elevation: Green's law revisited 2436
tide gauge<s> (More at GAUGES ...)
tides (More at SEA LEVEL ...)
analysis and prediction model 41
river flow: interactions discussed 45
East China Sea: storm surges: interaction: in Chinese, English abstract 52
gauge records 1909-1988: Mexico: Gulf of, N: sea level, rise: subsidence 261
propagating in channels: bottom friction, term: compact approximations 681
predictions: constraint on the use of extended harmonic analysis 682
ish larvae, as predators: zooplankton, as prey: turbulence, effects on encounter rates: wind: quantifying effects 941
harmonic solutions: satellite geodesy 1169
M2: World Ocean 1170
ocean loading: earth tides: geodesy, Earth response to loading 1469
dynamics: South Africa, Palmiet: estuarine circulation ... 1778

currents, near-shore dynamics; HF radar observations 1782
ocean, loading by; Europe; tidal gravity 1819
rectification; seamounts, over; model 1820
stage, effects; benthic microalgae, intertidal; light, sun angle effects; productivity 2310
heterogeneous data inversions 2426
modelling with and without assimilating data 2428
South China Sea, N; tidal currents 2909
Europe, NW; shelf circulation; EUROSPILL databases ... 3242
tides: baroclinic
North Atlantic, W tropical; North Equatorial Countercurrent 1821
tides: barotropic
Mediterranean Sea; Sicily; Strait of; Tunisia, shelf 2911
tides: earth
tides, ocean loading; geodesy, Earth response to loading 1469
tectonics; tides as tectonic pump and vibrator 2171
tides: global
energetics; Geosat altimetry data 1168
tides: internal
straits; modelling stationary internal disturbances 75
Indian Ocean; barotropic waves, internal 76
Japan, N, Sanriku coast; internal waves 1196
Canada; Laurentian Channel, variability in 1198
in axially symmetrical basin 2453
effects; China; Huanghai Sea, N; currents, tidal, vertical structure 2455
tidewater glaciers
Maine; Gulf of; deposition, structural control of; sedimentation 2032
sub-polar; Barents Sea, N, outside Nordaustlandet; depositional environments; sediments 2038
grounding-line systems as second-order controls on fluctuations of termini 2066
Canada; Arctic area; sedimentation, glaciomarine 2069
tiltmeters
submarine volcanoes; ocean bottom monitoring 390
time standards
frequency standards; special issue 2387
tin
inorganic, a.a.s. determinations; seawater; in Chinese, English abstract 177
organotins; diatoms; toxicities; in Chinese, English abstract . 570
biota; bioaccumulation; in Chinese, English abstract 571
speciation; China, Jiaozhou Bay; seawater; phytoplankton; sediments; in Chinese, English abstract 596
butyltins 2 years after TBT use restricted; estuarine sediments 811
and tributyltin determinations; seawater 1310
Gastropoda, dog whelks, imposex in; organotin pollution, widespread 1710
tributyltin; bacteria, TBT-resistant; sediments, estuarine and freshwater 1711
Chesapeake Bay; tributyltin; pollution monitoring; statistical modelling of data 3039
tributyl; chemical analysis, reliability; water quality, criteria, implications for; seawater 3042
Scotland, lochs; Gastropoda; Nucella, lapillus; tributyltin, mariculture-related 3202
Scotland, oil ports; Gastropoda; Nucella, lapillus; tributyltin, impacts from large vessels 3205
Gastropoda; Nucella, lapillus, imposex in; tributyltin; geographic uniformity of response and effects 3206
tributyltin, sediment-bound; deposit feeders, *Scrobicularia plana*, effects; bioavailability 3210
tributyltin, metabolism; biota; possible linkages to effects ... 3211
alkyltins; toxicities; mussels, tissue levels 3212
butyltins; Netherlands; seawater; biota, effects on 3213
tributyltin, site-specific effects; mussel growth, rates; biomonitoring, and assessment 3214
Gastropoda; Nucella, lapillus, imposex in females; tributyltin; steroid titers 3215
California; tributyltin; toxicities; oysters, field bioassay approach to monitoring 3216
triphenyltin analysis; fish 3218
California; San Diego Bay; tributyltin; biomonitoring . 3219
butyltins; Mexico; Gulf of; biomonitoring, using oysters .. 3221
organotins; Mediterranean Sea; pollution; continuing cause for concern 3239
France, environmental problems; tributyltin; pollution, assessment, regulations, prospects 3240
organotin; U.K., estuaries; tributyltin; toxicities; reduction occurring 3241
residues; sewage sludge; tributyltin 3243
U.K.; Tamar Estuary; tributyltin, concentrations; effectiveness of legislation and improved dockyard practices ... 3245
organotin; tributyltin; pollution monitoring; symposium . 3248
U.K.; tributyltin, reductions in concentrations following legislation 3250
Tokyo Bay
Japan; Funka Bay; coastal sediments; uranium 197
tomography: acoustic
ocean; U.S. report to IUGG 719
tomography: neutrino
Earth, density distribution 3123
tomography: seismic
2-D synthetic study of global traveltime 235
geoid; plate motions; U.S. report to IUGG 887
Alaska, S, beneath; subducting slabs, Pacific 1534
imaging; North Pacific, W; subducted lithosphere; island arcs, beneath 1559
dual; imaging complex structures 2000
Aegean Sea; resolving power of images 2004
traveltime; methods comparison 2008
delay-time; Europe, beneath; Mediterranean Sea, beneath; Asia Minor, beneath; mantle, upper 2174
Oregon, S, beneath; Juan de Fuca Plate; lithosphere 2645
mantle, upper, global; seismic velocities and anisotropies 2650
Tonga
slab, geometry and extent; Pacific; subducting lithosphere; tectonics 885
Pacific, equatorial; seismic strain, rate; crustal deformation 886
Fiji; New Zealand; Gnathostomulida 2270
Tonga Trench
seismic waves, source radiation patterns; subduction zones, beneath; crust, structure, constraints on 2179
topographic flow
periodically forced; fluid dynamics; rotating fluid experiments 728
topographic waves (More at WAVES ...)
margin, generation over 64
topography (More at FLOOR ...)
flow over; stratified fluids; waves, finite-amplitude, resonant generation of 689
complex, over; air flow; turbulence, closure schemes; mesoscale planetary boundary layer numerical model simulations, cold air outbreaks 762
effects; Indian Ocean; circulation, seasonal 1129
slowly-varying; Kelvin waves, coastal 2429
topography: bottom
sloping, over; vorticity fronts, evolution 1166
fluid dynamics; friction, effects in rotating flow 1242
spinup; circulation; abyssal basins 1774
periodic; internal waves, scattering 1841
Arctic Ocean; seafloor, relief; new orographic map 2017
topography: dynamic
Atlantic, tropical, over 9
satellite altimetry; observations, Seasat 644
ocean; satellite altimetry, Seasat; temporal variability, U.K. studies reviewed 649
sea level, global scale surface variability; circulation; altimetric and tide gauge measurements 650
ocean-atmosphere interactions; circulation; large scale oceanic responses to atmospheric forcing at low frequencies 749
remote sensing; satellites, the TOPEX/POSEIDON mission; report 1070
equatorial currents, zonal geostrophic 1770
New England Seamounts, near; model and observations compared 2399
North Atlantic; remote sensing, Geosat radar altimetry; FASINEX data 2900
topography: seamount
satellite altimetry; 3-D modelling 1362
topological fluid dynamics
vortex rings, linking 1889
vortices, linking rings 2383
Torres Strait
Australia, NE; sand waves, subtidal dunes; currents, wind-driven; dune asymmetry reversal with reversing currents 817
towed nets
plankton pumping systems 1612
towed vehicle<s> (More at VEHICLES ...)
towing (More at OCEANOGRAPHIC APPARATUS ...)

towing fish (More at fish, OCEANOGRAPHIC APPARATUS ...)
toxic chemicals
fate: tropics; editorial ... 1093
Chesapeake Bay; pollution; viewpoint ... 2871
international law; shipping liability; carriage of hazardous and noxious substances; development of a liability regime . 2878
toxicities
and bioconcentration, relationship; Selenastrum, capricornutum; aromatic hydrocarbons, volatile; microalgae ... 552
Phaeodactylum, tricornutum; mercury; in Chinese, English abstract ... 555
phytoplankton; metals, Cu, Zn, Pb, Cd; in Chinese, English abstract ... 560
Phaeodactylum, tricornutum; copper; in Chinese, English abstract ... 567
diatoms; tin, organotins; in Chinese, English abstract ... 570
to respiratory metabolism, nutrition, excretion, hydrolase activity; Mysidacea; Leptomysis, lingvura; cadmium, sublethal effects ... 1034
marine envenomations; medicine, treatment of victims; treatments for bites, stings, poisoning by consumption, electric shocking ... 1082
acute; Decapoda; Scylla, serrata, effects on behavior; pesticides, 3 ... 1707
profiles; California, Palos Verdes shelf and Santa Monica Bay; sediments; organic matter; contaminants, chemical . 1996
tin, alkyltins; mussels, tissue levels ... 3212
California; tin; tributyltin; oysters, field bioassay approach to monitoring ... 3216
U.K., estuaries; tin, organotin; tributyltin; reduction occurring ... 3241
toxicity testing
eukaryotic cells, RNA synthesis inhibition; highly sensitive water assay; in French, English abstract ... 547
surfactants, synthetic, and biosurfactants; microbiota ... 2845
toxins
brevetoxin; Cetacea, bottlenose dolphins; mass mortalities; 1987-88 Northwest Atlantic event investigated ... 960
trace analysis
natural waters; analytical chemistry; biennial review of techniques ... 178
natural waters; manganese ... 179
particulates, characterization; spectrometry, ICP-MS ... 2998
particulates, collection ... 3026
trace chemistry
World Ocean; atmospheric deposition ... 2510
trace elements (More at ELEMENTS ...)
content; precipitation, analysis ... 154
Baja California, shelf off; water column, shelf, coastal; natural process contributions vs anthropogenic inputs ... 224
estuaries, and coastal waters; U.S. report to IUGG ... 778
distribution; Israel, Haifa Bay; Echinodermata; baseline ... 1037
San Francisco Bay; California; organochlorines; content in surf scooters, 1985 ... 1042
distribution; Mexico, Navachiste Lagoon; Bivalvia; baseline 1043
scavenging; colloids, surface chemistry ... 3006
anoxic water; filtration, techniques for river, coastal waters . 3023
flux modification; Mid-Atlantic Ridge; hydrothermal scavenging ... 3061
trace gases (More at GAS ...)
Europe, coastal zone; atmosphere; CO_2, CH_4, COS ... 1940
trace metals (More at METALS ...)
seawater; electrothermal AAS determinations ... 180
sediments; Cu, Zn, Cd, Pb determinations ... 182
seawater, deep-ocean, abundances in; effect of surface reactions 187
dissolved and particulate; North Sea, Dogger Bank area; surface, waters ... 229
Adriatic Sea, N; seaweeds ... 559
enrichments; Spain; Cadiz; Gulf of, waters ... 797
speciation; Trinidad, Gulf of Paria; sediments ... 802
Italy, Olbia Bay; sediments ... 808
persistence; Arctic area; sediments; drilling effluents, contamination by ... 1092
Bengal; Bay of, W, distribution in; particulates ... 1341
accumulation; California, Borderland; Santa Barbara Basin; sediments ... 2068
scavenging, effects on; bacterial communities, changing; particulates, deep-sea plume ... 2256
waste disposal, dumping ground; sediments ... 2361
particulate; Indian Ocean, distributions over; atmospheric aerosols ... 2551
Mississippi River, Delta outflow region; river discharges .. 2583
tracers: circulation
Banda Sea, S Banda Basin; distribution, application of Munk's abyssal recipes ... 20
North Pacific; tritium, bomb-produced; two decades of mixing ... 647
Ross Sea; Antarctica; chlorofluorocarbons; ventilation, rapid ... 1136
Japan; Sea of; tritium; deep water renewal time ... 1791
tracers: cosmogenic
Southern California Bight; mixing, vertical; radionuclides, P-32, Be-7 ... 2480
tracers: flow
Atlantic; hexachlorocyclohexane, isomers ... 2584
tracers: water mass
conservative; Pacific, intermediate and deep waters; consistent inventory ... 670
Trachymedusae
Anthomedusae; Leptomedusae; Limnomedusae; Narcomedusae; medusae, distribution patterns ... 2795
trade winds (More at WIND ...)
traffic: vehicular
ORVs; sandy beaches; macrofauna, effects on ... 1094
Trans-Atlantic Geotraverse (Use TAG)
transcurrent faulting
tectonics, strike-slip; workshop papers ... 1487
transducers (More at OCEANOGRAPHIC APPARATUS, SOUND ...)
transform faults (More at FAULTS ...)
Caribbean Sea; Cayman Trough, SeaMARC II mapping .. 357
Atlantic, equatorial; Romanche Fracture Zone; bathymetry ... 891
zone migration; propagating ridges, at; implications of bookshelf faulting ... 2138
weak, along; crustal deformation, and stress ... 2184
transform margins
Australia, off; Exmouth Plateau; continent-ocean boundaries; tectonics, development ... 863
transgression<s> (More at SEA LEVEL ...)
transmission electron microscopes, microscopy (Use TEM)
transoceanic cables
remote sensing, from above and below; value of retired cables to research ... 1721
transparency
water; Baltic Sea, trend analysis; chlorophyll; productivity; zooplankton, biomass ... 3149
transport (More at FLUID DYNAMICS ...)
transport: atmospheric
Mediterranean Sea, basin; eolian dust; dust intrusion events 769
transport: baroclinic
North Pacific, E; annual and interannual variability across Line P ... 646
transport: bedload
overview ... 821
transport: biomass
California, N, off; current jets; phytoplankton; cool filament chemical and biological structure ... 3255
transport: buoyancy
mixed layer, dynamics ... 1229
transport: chemical
and isotopic; particulates, as vehicle; vertical change index .. 1349
transport: current
coastal zone; use of simulated drifter tracks to investigate patterns and residence times ... 640
Kuroshio; estimates using an inverse technique ... 652
California, N, coastal transition zone; nutrients, distribution, effects; phytoplankton, biomass, species composition; primary production ... 925
Gulf Stream, meander; satellite imagery ... 1151
indications from undersea telephone cables ... 1153
and structure; Indian Ocean, W; East African Coastal Current ... 2906
transport: eddy
and advection; circulation; currents; observing with floats .. 636
transport: heat
poleward; review of hierarchy of models of increasing resolution 1261
oceanic; climate change; chaos theory, applications; report 2380
transport: larval
internal tidal bores; upwelling ... 452
transport: mass
waves ... 2434

waves ... 2435
transport: moisture
formulation; circulation, GCM simulations, sensitivity; climate ... 135
transport: momentum
and generation; precipitation, and kinematic structure; atmospheric convection ... 2524
transport: particle
atmospheric, riverine; Mediterranean Sea, Gulf of Lions; metals, Pb and Zn as indicators ... 1339
transport: pollutant
and dilution, wind-augmented; shallow-water flows ... 1091
transport: sediment
mass movements; North Atlantic, W; slope, and rise; submarine processes ... 830
lateral; Okinawa Trough; radionuclides, natural, as tracers 1332
beaches; shoreline dynamics, onshore-offshore transport .. 1370
Egypt; Nile Delta; nearshore patterns ... 2020
longshore, rate ... 2021
Saint Lawrence; Gulf of, N; hydrodynamics, processes, influence of ... 2024
suspended; suspended matter; nonequilibrium, simple model 2028
Canada, E shelf ... 2030
transport: Sverdrup
Florida Current, sources; currents ... 663
transport: tidal
long waves, tidal, elevation; Green's law revisited ... 2436
transport: volume
Cadiz; Gulf of; Gibraltar; Strait of; Mediterranean area; water masses, exchange; mixing ... 672
North Atlantic, W subtropical; circulation; currents, seasonal variations ... 1768
East China Sea; straits, through ... 2418
Atlantic; water masses, North Atlantic Deep Water; flow, across the equator ... 2423
trapped waves (More at WAVES ...)
coastally; scattering ... 55
traps
cylindrical tube traps; larval samplers ... 3146
trawling
effects; Canada, E; dredging, effects; ocean dumping; shelf ... 2360
trawls (More at OCEANOGRAPHIC APPARATUS ...)
trenches (More at LITHOSPHERE ...)
spreading centers, Antarctic-Phoenix; ridges, crests; subduction zones; effects of interactions ... 2628
tributyltin
Chesapeake Bay; tin; pollution monitoring; statistical modelling of data ... 3039
chemical analysis, reliability; water quality, criteria, implications for; seawater ... 3042
mariculture-related; Scotland, lochs; Gastropoda; Nucella, lapillus; tin ... 3202
impacts from large vessels; Scotland, oil ports; Gastropoda; Nucella, lapillus; tin ... 3205
Gastropoda; Nucella, lapillus, imposex in; tin; geographic uniformity of response and effects ... 3206
sediment-bound; tin; deposit feeders, *Scrobicularia plana*, effects; bioavailability ... 3210
metabolism; tin; biota; possible linkages to effects ... 3211
site-specific effects; tin; mussel growth, rates; biomonitoring, and assessment ... 3214
Gastropoda; Nucella, lapillus, imposex in females; tin; steroid titers ... 3215
California; tin; toxicities; oysters, field bioassay approach to monitoring ... 3216
California; San Diego Bay; tin; biomonitoring ... 3219
France, environmental problems; tin; pollution, assessment, regulations, prospects ... 3240
U.K., estuaries; tin, organotin; toxicities; reduction occurring 3241
sewage sludge; tin, residues ... 3243
concentrations; U.K.; Tamar Estuary; tin; effectiveness of legislation and improved dockyard practices ... 3245
tin, organotin; pollution monitoring; symposium ... 3248
reductions in concentrations following legislation; U.K.; tin .. 3250
Trichechus
manatus; Florida, NW peninsula; manatees; distribution, movements ... 1629
manatus; U.S., S, Florida and Georgia; habitats, managing; environmental management; geographic information systems, workshop; manatees ... 1630
manatus; Florida; manatees; debris ingestion ... 2838
Trichodesmium
cyanobacteria; nitrogen fixation, regulation ... 2756
major role; North Atlantic; cyanobacteria; nutrient cycling ... 3153
Tridacna
gigas shells, correlation in; Bivalvia; temperature, stable oxygen isotope record; light, attenuation profiles ... 1375
Trieste: Gulf of
Adriatic Sea; geochemical surveys ... 1390
Adriatic Sea; sediments, marine geology ... 1400
Trinidad
Gulf of Paria; sediments; trace metals, speciation ... 802
triple junction<s> (More at LITHOSPHERE ...)
triple junctions
North American Plate, active fragmentation; Mexico, off Manzanillo; plate tectonics ... 1478
tritium
bomb-produced; North Pacific; circulation tracers; two decades of mixing ... 647
Japan; Sea of; circulation tracers; deep water renewal time 1791
concentrations; Hawaii; Kilauea, active crater; cold fusion, no evidence for ... 2634
Troodos
Cyprus; ophiolites; crust, fossil ore bodies ... 1531
trophic dynamics (See also eutrophication, food chains, nutrients ...)
ecology ... 574
and structure; shelf ecosystems; model studies ... 1578
stable isotope determinations; seabirds, great auks ... 1651
food webs, patterns; lessons from a species-rich web ... 2200
structure; Caribbean Sea, during spring bloom; saline fronts; microplankton ... 2211
trophic energetics
predator-prey dynamics; corals, *Pocillopora johnstonianus*; fish, coral-feeding, damselfish ... 919
tropical aquaculture
South Pacific; advances; 75 papers ... 572
tropical cyclones
South Pacific; Indian Ocean, SE; 1988-89 season ... 156
atmospheric waves, unstable inertia-gravity; typhoons, development; effects on storm development ... 158
Atlantic, 1990 ... 757
storm forecasting, landfall and structure; model sensitivity to soil moisture parameterizations ... 761
atmospheric convection; variations caused by upper-tropospheric troughs ... 765
motion; weather forecasting; interactive analysis and forecast system ... 1291
moving; ocean-atmosphere interactions; mutual response . 1913
motion; barotropic shear flow, in ... 1933
post-monsoon activity; Indian Ocean, N, over ... 2546
Tropical Experiment (Use TROPEX)
tropical gyres
South Atlantic, near 13°S, 5°E ... 638
tropical storms
formation; baroclinic instability ... 759
tropical waves (More at WAVES ...)
tropics
Pacific, W tropical; weather, Japan summer, unusual; relationships ... 126
toxic chemicals, fate; editorial ... 1093
monsoon year, proposed as concept; climate, unit year of climate anomalies; ocean-atmosphere interactions ... 1270
coral reefs vs pelagic waters; protein synthesis, and DNA synthesis, rates; bacterial assemblages ... 2264
troposphere (More at ATMOSPHERE ...)
sulfur cycle, global model ... 2548
tropospheric chemistry
U.S. report to IUGG ... 767
photochemistry ... 1294
tropospheric hydroxyl
stability during ice ages, interglacials, and modern times ... 1941
tropospheric temperature
atmospheric monitoring; remote sensing; precision monitoring 1979-90 ... 2497
tropospheric water
Northern Hemisphere; Southern Hemisphere; wintertime asymmetry ... 1255
tropospheric waves
Rossby-gravity; atmospheric convection; structure, variation of tropical convection fluctuations ... 2522

troughs
Taiwan, SE, off: collision tectonics: ridges 3087
troughs: glacial
Quaternary, Late: Canada, W: tectonics: shelf sediments 2126
tsunamis (More at WAVES ...)
1983: Japan: Sea of: spectral characteristics 49
origin: California: San Francisco, 1906: earthquakes ... 1107
seismic waves, excitation: efficiency of single forces vs double-couples 1573
abnormal: Japan: earthquakes, Torishima 1984 2445
Tsushima Current
nearshore branch structure, summer: Japan: currents 30
Tsushima Strait
area: Japan: Sea of, implications for the opening mode: paleomagnetism, and fission track geochronology: tectonics 1460
tube burrows
decomposition: Ceriantheopsis, americanus: sediments, bulk carbon and nitrogen balance 2248
tube dwellers (More at FAUNA ...)
tuna
yellowfin, schools: sharks: porpoises: seabirds: polyspecific associates 1622
tuna fisheries
commercial seiners: Cetacea: porpoises, dolphins, protection: vessel registry, foreign-flag: are regulations increasing foreign-flag registration? 2366
Tunicata
mid-water: Ligurian Sea: fronts, permanent: relations 1591
pelagic: zooplankton: high-resolution vertical profiles 1608
Tunisia
shelf: Mediterranean Sea: Sicily: Strait of: barotropic tides 2911
turbid plumes
France: Gironde Estuary: satellite data 668
turbidite<s> (More at SEDIMENTS ...)
turbidite sediments
Japan: Suruga Trough: variations in C-14 ages of organic fractions 295
generation: currents, continuous, by: in French, English abstract 1381
turbidity currents (More at CURRENTS ...)
duration: the Bouma division A 267
submarine flowslides: physics, modelling 272
density, stable gradient, erosion of: convection, sedimentation-driven 1230
turbidity meters (More at METERS ...)
turbidity plumes
dredging, induced by 2352
turbulence (More at FLUID DYNAMICS ...)
surface mixed layer: wind, mixing: effect of horizontal buoyancy gradient on energy budget 113
modelling: fluid dynamics: mathematical analysis 604
Kolmogorov spectrum, and its oceanic cousins: review 722
fluid dynamics: mixing: Kolmogorov similarity hypotheses for scalar fields 725
Kolmogorov: A. N.: stochastic processes: special issue celebrating his work: 16 papers 726
tiered 2-D and beta-plane: fluid dynamics: energy spectra and coherent structure 727
closure schemes: air flow: topography, complex, over: mesoscale planetary boundary layer numerical model simulations, cold air outbreaks 762
effects on encounter rates: ish larvae, as predators: zooplankton, as prey: wind: tides: quantifying effects 941
vorticity: acoustics: fluid dynamics: flow, incompressible fluids 1245
undertows, modelling: currents, under- 1799
small-scale: water column: microscale profiler 1878
microscale, intensification: internal waves 1881
mixing: heat flux: thermocline, main, in 2476
decay, following: salt fingers, formation: lab experiments 2483
mixing: shear flow, stratified 2944
turbulence: air
wind gusts, over-water 751
turbulence energy
models: viscosity, spectral, models: fluid dynamics 2486
turbulence: fossil
fluid dynamics, rotating and stratified flows 2488
turbulent boundary layer (More at BOUNDARY LAYERS ...)
low-Reynolds-number 1241
turbulent convection (More at CONVECTION ...)
turbulent diffusion
models: fluid dynamics: Lagrangian representation 120
Gibraltar: Strait of: salinity, anomaly 1958
fluid dynamics: Rossby waves, barotropic: applications ... 2942
turbulent flow (More at FLOW ...)
turbulent mixed layer
generation and growth: in rotating stratified fluid 2487
turbulent plumes
generated by: gravity currents: sedimentation 2039
turbulent transport (More at TRANSPORT ...)
Turkey
Marmara: Sea of, NE, Golden Horn Estuary and Izmit Bay: sediments: heavy metals 1352
Golden Horn: sediments: pollution, chronology 1997
Istanbul: Marmara: Sea of: seismicity, long-term 2636
typhoon<s> (More at STORMS ...)
typhoons
South China Sea: storm waves: in Chinese, English abstract 53
days between first and last landings: China: El Niñ0: annual variation characteristics: in Chinese, English abstract 157
development: atmospheric waves, unstable inertia-gravity: tropical cyclones: effects on storm development 158
induced by: Japan, around: storm surges: in Japanese, English abstract 1184
hydrodynamic model: Earth rotation, accounting for 1293
zone, in: atmosphere: ocean-atmosphere interactions ... 1911
movement, occurring with: storm microseisms, and infrasonic 1934
Tyrrhenian Sea
N: shelf sediments: seismic stratigraphy, paleogeographical evolution 309
SE: Mediterranean area: crust: seismicity 418
acoustics, identification of the ocean transfer function: note .. 711
Alps, western: ophiolites: crust 896
opening, postulated mechanism: basin subsidence: tectonics 1485
N: selenium, levels: mercury, assessments: biota, edible: Se/Hg relationships 1699
E margin: shelf sediments, downlapping: geometry, lateral variation, preservation 2073
Pleistocene: Pliocene: sapropels 2092

U.K. (See also British Isles, Great Britain ...)
Severn Estuary: pollutant discharges: environmental assessment 590
Somerset, Berrow Flats: intertidal zone: diatoms, epipelic, seasonal changes 1024
monitoring programs, impact assessment, disposal licensing, etc.: pollution monitoring: contaminants, non-radioactive: ocean waste disposal: MAFF report 1988-89 1088
Tamar Estuary: metals, Ni, Sb, Se, Sn, U, V: electrochemical study 1313
activities: offshore petroleum: oil: gas 1563
convergent fronts: pollution, implications for: estuaries .. 1725
Great Britain: science: research: commentary 1740
Wales, Dyfi Estuary: intertidal sediments: tidal bedding, and cyclicities 2037
NW: Faroe-Shetland Channel: basin sedimentation, glacially-influenced 2070
S Gower coastline: Bristol Channel: chlorophyll, -a, mapping: remote sensing, airborne thematic mapper ... 2213
Inner Moray Firth, implications of Mesozoic-Recent development: sedimentary basins 3137
estuaries: tin, organotin: tributyltin: toxicities: reduction occurring 3241
Tamar Estuary: tin: tributyltin, concentrations: effectiveness of legislation and improved dockyard practices ... 3245
tin: tributyltin, reductions in concentrations following legislation 3250
Ulleung Basin
Korea, off: hydrographic surveys: physical properties 2422
Ullung Warm Lens
Korea, off: water masses: spatiotemporal characteristics ... 2421
ultrabasites (More at IGNEOUS- ...)
ultraviolet light
effects: Cryptomonas, maculata: flagellates: biochemical and spectroscopic analysis 2836
ultraviolet radiation (More at RADIATION ...)

Ulva
lactuca, sea lettuce beds; Decapoda; Zostera, marina, eelgrass beds; fish, epibenthic; marsh creeks; habitats comparison 2252
U.N. Conference on Science and Technology for Development (Use UNCSTD)
U.N. Conference on the Law of the Sea (Use UNCLOS)
U.N. Environmental Program (Use UNEP)
undation theory (More at TECTONICS ...)
undercurrents
seasonal, modelling; Somali Current; Arabian Sea; currents 2904
undercurrents: equatorial
boundary currents, western; relationship 1807
undersea technology
robotics; remotely operated vehicles, submarine; applications 1078
undertows
modelling; turbulence; currents, under- 1799
underwater exploration
remote sensing, high-resolution, optical and acoustic; instrumentation, imaging systems reviewed 1062
underwater habitat<s> (More at HABITATS, DIVING ...)
underwater vehicles (More at VEHICLES ...)
universities
indirect costs; audits, GAO; consequences of abuses 2372
uplift: crustal
Europe, N, postglacial rebound 2117
Upogebia
pugettensis, effects; Natantia; benthic macrofauna, infaunal abundance 474
upper layer (More at LAYERS ...)
upper ocean
sampling; remote sensing, and in-situ; concurrent high-resolution physical and bio-optical measurements and their applications 1714
Hudson Bay; sea ice; variation of upper layer dynamics during seasonal breakup 2460
North Pacific, W, 1964-82; heat, content changes 2896
upwelling (More at OCEAN ...)
increased; Portugal, off; glaciation, last, during; diatom evidence 307
areas; South Africa; phytoplankton, kelp-bed populations 438
internal tidal bores; larval transport 452
areas, dynamics; Canary Upwelling, vicinity; bottom currents 1152
regions; California, N, shelf; bottom boundary layer 1154
variability; Africa, NW, off; Quaternary, Latest; fossil record, diatom evidence 1417
and seasonal hydrographic conditions; Southern California Bight; San Pedro Basin; Foraminifera, planktonic, response 2362
quiescent phase, during; Benguela Upwelling, system; nitrogen, supply to the euphotic zone 2572
state variables, short-term variability; Benguela Upwelling; phytoplankton; nitrogen 2665
equatorial and coastal; Guinea; Gulf of; Atlantic; in French, English abstract 2908
upwelling: asthenospheric
intermittent; Kenya, Gregory Rift; basalts, composition, dates 1505
upwelling: coastal
and fronts; China, off Zhejiang 40
Quaternary, Late, during summer; Arabian Sea; atmospheric circulation, paleo- 322
Peru; Quaternary, Late; productivity, changes revealed by diatoms 331
California, N, off; phytoplankton, transport; water masses, subduction 1114
upwelling ecosystems
Benguela Current, N; Euphausiacea; Nematoscelis, and Euphausia; diet, feeding, vertical space partitioning 1000
upwelling environments
Southern California Bight, San Pedro Basin; Foraminifera, planktonic; seasonal C and O isotopic variability 1017
upwelling filaments
South Atlantic, E; currents 679
upwelling: wind-driven
coastal; Bengal; Bay of, western boundary; monsoon, SW, during 2424
upwelling zones
South Atlantic, SE; Namibia, coast; seston biomass 1616
picoplankton; food chains, dynamics; reaction-diffusion model 2683
Caribbean Sea, off Mexico; Campeche Bank; Siphonophora, populations 2785
chemical and physical oceanography; Benguela Upwelling, S; short-term variability 2855
phytoplankton; nitrates, kinetics, and shift-up 3154
uranium
determination by isotope dilution ICP/MS; pore water 184
Japan; Tokyo Bay; Funka Bay; coastal sediments 197
-234, anomalies; corals, older than 150 kyr 832
extraction; seawater; hydrous titanium oxide adsorbent studies 2554
sediment-water interface; where it goes and why 223
urchins
sea urchin eggs; Echinoidea; pollution bioassays; enhancing sensitivity 2323
U.S.
shoreline dynamics; coasts, historical changes; erosion, mapping; CZM 251
Littoral Environment Observation Program; shoreline dynamics; beaches, observations 259
E coast; fluvial sediments; estuaries, coastal plain 273
Atlantic coast, first discovery 1988; Decapoda, grapsid; Hemigrapsus, sanguineus, a W Pacific crab; exotic species 1009
reports; International Union of Geodesy and Geophysics; collection of reviews of U.S. research efforts; 107 reports 1073
professional associations; government employees; current ethics proposals harmful to scientists 1105
SE, off; marine boundary layer, evolution; cold air outbreaks, during 1282
S, Florida and Georgia; Trichechus, manatus; habitats, managing; environmental management; geographic information systems, workshop; manatees 1630
U.S.S.R.; oceanographic research, cooperation in; special issue; educational 1741
mid-Atlantic coastal plain; Pliocene, chronology; sea level, fluctuations 2097
W, kinematics; plate motions, Sierra Nevada-North America motion; VLBI measurements 2121
NASA; Mission to Planet Earth, program description; global change; climate 2863
climate; global change, program; Navy/NOAA Joint Ice Center, role; ice, regional and global analyses and forecasts 2867
petroleum potential, future supply; oil; gas, natural 2874
SE; organic matter, terrestrial DOM; shelf, distribution on 2982
shelf; Gulf Stream, frontal eddy influence; shelf communities; productivity 3256
U.S. Coastal Zone Management Act (See also CZM ...)
U.S.S.R.
VNIRO, All-Union Research Institute of Marine Fisheries and Oceanography; European Aquatic Sciences Libraries and Information Centres, association of; participation in EURASLIC; French and English 580
U.S.; oceanographic research, cooperation in; special issue; educational 1741
Avachinskiy Bay; eddies, structural characteristics 1796
Valencia Trough
gorge; Messinian, refill channel; Mediterranean Sea; evaporite sediments, formation 2018
valleys: submarine
Mediterranean Sea, Gulf of Lion and Ebro continental margins; depositional environments 242
vanadium
concentration; seawater; anoxic basins, and sediments; molybdenum, concentration 2579
Vanuatu
seismicity; arc tectonics 1540
Pacific; Solomon Islands; petroleum potential; island arcs 1564
vapor: water
mixing ratio; climate, sensitivity 2506
vehicles (More at OCEANOGRAPHIC APPARATUS, VESSELS ...)

vehicles: remotely operated
submarine; undersea technology; robotics; applications .. 1078
vehicular traffic
ORVs; sandy beaches; macrofauna, effects on 1094
velocity shear
buoyancy, effects; currents; nonlinear interactions in a stratified fluid 1879
Vema Fracture Zone
transverse ridge; Atlantic; fracture zones; crust, geology .. 880
Venice Lagoon
Italy; sediments, and resuspended sediments; carbon, organic; nitrogen, organic; PCBs, contamination, relation with 3038
vent communities
sulfides, biological tolerance of; sediments; macrofauna .. 2207
vent fauna
chemical composition 469
Bivalvia; Bathymodiolus, thermophilus; evidence for filter-feeding 2788
vent fluids
microbial methane, enhanced oxidation 990
ventilated thermocline
mixed layer, role of finite thickness 111
ventilation
implications; North Pacific; water masses, anomalous, Okhotsk Sea 676
rapid; Ross Sea; Antarctica; chlorofluorocarbons; circulation tracers 1136
ventilation: basin
Alaskan Gyre, role; water masses, North Pacific Intermediate Waters 1137
ventilation: thermocline
South Pacific; Peru Upwelling, significance 2425
vents: gas
Okhotsk; Sea of; Paramushir Island, off; metals, anomalous behavior 2186
vents: hydrothermal
fields; East Pacific Rise, 13°N; particulates, settling; sediment trap measurements 213
magma chambers, freezing, convecting; heat transfer, conductive; implications for black smokers 306
Ostrocoda, myodocopid; Pacific, E 513
distribution; East Pacific Rise; mid-ocean ridges; tectonics, and magmatism, relation to 1410
high-temperature; East Pacific Rise; suspended matter, in bottom waters; metals 2076
vicinity; manganese, biosedimentation 2078
near; Juan de Fuca Ridge, S; flow, mid-depth oceanic 2600
3 sites; temperature, time series 2602
South Pacific, Lau and North Fiji basins; bacteria, anaerobic S-dependent thermophilic; isolation, identification 2720
North Fiji Basin, Ridge; Pacific; geology, geochemistry ... 3057
Lake Baikal; Russia; lithospheric heat flow 3060
Versatile Experimental Kelvar Array (Use VEKA)
vertebrate carcasses
a whale skeleton; California; Santa Catalina Basin, bathyal; taphonomy, deep-water 846
vertical structure (More at STRUCTURE ...)
vertical tectonics (More at TECTONICS ...)
vesicles
contents; mid-ocean ridges; rocks, 'popping'; implications for degassing, discussion 3101
vessel registry
foreign-flag; Cetacea; tuna fisheries, commercial seiners; porpoises, dolphins, protection; are regulations increasing foreign-flag registration? 2366
vessels (See also barges, icebreakers, naval architecture, semisubmersibles, ships, submersibles, tankers, vehicles ...)
Vesterisbank Volcano
Norwegian Sea; Greenland Sea; Kolbeinsey Ridge; Polarstern investigations of sediments, bathymetry; in German, English abstract 3235
Vibrio
deep-sea; bacteria, psychrotrophic; amylase characterization . 2735
Vietnam
off; productivity; metabolism; coral reefs, ecosystems ... 1645
coast; South China Sea; flooding, calculating 2029
Vine-Matthews hypothesis (More at PLATE TECTONICS ...)
Virginia
Rappahannock River; hypoxic water 201
viruses (See also enteroviruses ...)
production and decay; aquatic environments 489
abundance; seawater, in; TEM and epifluorescence measurements 1653
bacteria; organic matter, dissolved; particulates; filtration, ultra- 2986
viscosity
presence; waves, weakly nonlinear, evolution; surfactants, presence 690
spectral, models; turbulence energy, models; fluid dynamics 2486
viscosity: asthenospheric
Iceland; deglaciation, post-glacial rebound 1553
viscosity: eddy
waves, random, dissipation; drag-law models 2446
viscosity flow (More at FLOW ...)
viscosity: mantle
plate motions, velocities, inferences from 2156
viscous remanent magnetism (More at magnetism ...)
vision
polychromatic; Stomatopoda, mantis shrimp; pigments, color; compound eyes, structure 2816
VNIRO
All-Union Research Institute of Marine Fisheries and Oceanography; U.S.S.R.; European Aquatic Sciences Libraries and Information Centres, association of; participation in EURASLIC; French and English 580
vocalizations
Cetacea, identifying vocalizing dolphins; dataloggers 965
volcan<ism> (More at IGNEOUS- ...)
volcanic arcs
Hellenic Arc; Aegean Sea; hydrothermalism; metallogenesis, processes 1415
mantle, sources, the Hf-isotope connection; mid-ocean ridges; islands 1548
active; convergent margins; lithospheric stress, fields of the overriding plate 2131
New Hebrides Arc, (Vanuatu); magmatism, trough; K-Ar geochronology and petrology 3106
volcanic ash (See also tephra; more at ash ...)
volcanic emissions (More at AEROSOLS ...)
volcanic eruptions
submarine; pyroclastic debris, fallout; sediments, volcanic deposits 376
ejecta and eruption mechanisms; Japan; Izu Peninsula, off, 1989; seamounts, submarine volcanism 396
Krakatau, 1883 1504
Iceland, Lakagigar, 1783; carbon dioxide, and sulfur degassing; lava, largest flow on earth 3105
volcanic gases
submarine exhalations; Italy; Aeolian Islandse of; geochemical investigations 385
volcanic glass (More at GLASS ...)
volcanic glasses
Kilauea; Hawaii; mantle, secrets of the; report 2381
volcanic rocks
Okinawa Trough; North Pacific, NW; petrology, geochemistry 384
Sulawesi, NE; Quaternary; lava, geochemistry; magma, source chemistry 392
arc-; sediments; Th, Pb, and Sr isotope variations 411
seafloor; principle of geochemical mapping 1510
backarc basins; crust, structure inferences 2145
compositions; Canary Islands; North Atlantic; mantle, shallow, enriched 3117
volcanic sediments
Quaternary, Late; South China Sea; origin, research; in Chinese, English abstract 397
volcanics
alkali, subalkaline, origin of; Kamchatka; North Pacific, NW 394
volcanism
Red Sea, and Afar area; rifting; topographic and volcanic asymmetry; discussion 353
subaerial, unreliable indicator of; submarine lava; sulfur, low content 377
Indonesia, Muriah, evidence from; magmagenesis, potassic alkaline; subduction zones; interplay of subduction zone and intraplate processes 380
rapid eruption; Permian-Triassic boundary; Siberian Traps; flood basalts 388

East African Rift, System; Kenya, Samburu Hills; basalts, chemistry, secular variations; asthenosphere, upwelling . 391
and volcanology; magmatism; U.S. report to IUGG 875
Japan Arc; crust, deep structure; seismicity; relationships . 889
mantle plumes, superplumes; paleoclimate; relationship hypotheses; report 1115
progressive changes in; rifting, Iapetan, during; comparisons with East African/Red Sea rift system 1480
Pleistocene, Late; Iceland, beneath Snaefellsjokull Volcano; mantle melting, increased; deglaciation, during 1498
Hawaii; basalts, evolution, geochemistry; hotspots, melting model 1502
Cretaceous; Madagascar; basalts, sources; tracking oceanic and continental sources 1503
Izu Peninsula, in and around; seismicity; tectonics, implications 2127
Italy, W of Naples; Campi Flegrei; calderas; collection ... 2144
initiation of, model; mantle plumes; flood basalts; oceanic plateaus 2146
flood basalt; Aptian; Ontong Java Plateau; Indian Ocean; mantle plumes 2148
flood basalt; mantle plumes, heads; surface, Earth, interaction with; onset of small-scale convection 2158
subglacial eruptions; Iceland, S shelf; mass flow deposits; basalts, hyaloclastite 2629
Mid-Atlantic Ridge, N; Jan Mayen, island; seismicity .. 2632
Afar, depression; Djibuti Republic; mantle, sources, changes in; rifts, evolution 2656
Hawaii; Mauna Loa; Kileaua; basalts, tholeiitic; magma, primary, source 3111
Krafla; Iceland; crust 3122

volcanism: arc
basalts, appearance of low-Ca pyroxenes 386

volcanism: explosive
Alaska, Aleutian Range, Katmai; drilling project investigations, collection 1497

volcanism: hotspot
French Polynesiahe Marquesas alignment; basalts; in French, English abstract 375
Canary; North Atlantic, SE; crust, off Morocco, effects on . 383
Hawaii; mantle plumes; magma melts, generation 395
Hawaii; Iceland; East African Rift, System, Nyiragongo/Nyamuragira; Antarctica, Mt. Erebus; mantle plumes, deep; great circle distribution 2159

volcanism: lamprophyric
Cenozoic; Atlantic; Sierra Leone Rise; tectonics; implications for regional tectonics and stratigraphic time scale 1499

volcanism: submarine
Mexico, off Acapulco; mid-ocean ridges; benthic fauna seared by eruptions; report 3261

volcanoes
evolution; Hawaii; Mauna Kea; basalts, tholeiitic and alkalic, petrogenesis 874
Japan; Mount Fuji; Hakone Volcano 1495
mud or lava?; South Pacific; Manihiki Plateau; seamounts, surrounding 3099
active; helium, ratios, secular variations; eruption and plug hypothesis 3109

volcanoes: submarine
tiltmeters; ocean bottom monitoring 390

volume transport
Cadiz; Gulf of; Gibraltar; Strait of; Mediterranean area; water masses, exchange; mixing 672
North Atlantic, W subtropical; circulation; currents, seasonal variations 1768
East China Sea; straits, through 2418
Atlantic; water masses, North Atlantic Deep Water; flow, across the equator 2423

vortex rings
linking; topological fluid dynamics 1889

vortex waves
solitary; stratified fluids, in 1226

vortical lenses
stratified fluids; fluid dynamics; lab investigations 1234

vortices (See also maelstroms; more at FLUID DYNAMICS ...)
linking rings; topological fluid dynamics 2383

vortices: baroclinic
shedding; hydrothermal plumes 2478

vorticity
turbulence; acoustics; fluid dynamics; flow, incompressible fluids 1245
Rossby waves; mixing, chaotic; fluid dynamics 1248
dynamics of seasonal variations; Antarctic Circumpolar Current, model; currents 1802
synoptic vortices; remote sensing, evidence from; satellite imagery 1882
internal waves; interactions in strongly stratified flows 2452
filamentary; fluid dynamics; stability in 2-D geophysical vortex-dynamics models 2485
fluid dynamics; flow; currents; salt fingers; lab experiments in physical oceanography; collection 2489
potential; internal waves; fluid dynamics, Hamiltonian ... 2943

vorticity fronts
along; current jets; meanders, evolution 1156
evolution; bottom topography, sloping, over 1166

Vostok
Antarctica; atmospheric carbon dioxide; paleoclimate; ice cores 2508

Wadden Sea
Netherlands; intertidal sediments; denitrificationates, and nitrous oxide fluxes 222
and Scheldt Estuary; Netherlands; estuarine nutrients, influence on; intertidal mussel beds 483
Dutch; benthic fauna, changes; eutrophication 2707
Brachyura; Carcinus, maenas, abundance after winter; tidal flats 2799
ecological state; nutrients, load and trend; eutrophication .. 3147

Wales
Dyfi Estuary; U.K.; intertidal sediments; tidal bedding, and cyclicities 2037
sediments; PCBs; industrial effluents 2586
Dyfi Estuary; estuaries, microtidal, postglacial evolution; sediments 3046

war
aftermath, impacts; Arabian Gulf, past, present and future states; environmental management 593

warming: climate
atmospheric carbon dioxide; plants, aerial fertilization effect; greenhouse effect, implications for 133

warming: deep-sea
abrupt; Paleocene, end; mass extinction, benthic; paleocirculation, changes 1433

warming: global
random walks, manifestation of 131
probable effects; climate change; productivity, oceanic, changing 431
attempts to measure; Indian Ocean, S; Heard Island, Experiment; acoustic waves, travel times; lecture by Walter Munk 715
Cretaceous, Mid-; mantle plumes, superplumes; carbon dioxide 1421
South Africa; Benguela Upwelling, area; chlorophyll, *-a* distribution; phytoplankton, possible effects on; fish, pelagic, implications for 1586
ocean-atmosphere interactions; atmospheric carbon dioxide, increase; GCM simulations analyzed 1747
climate change; comments on mechanism proposed limiting tropical Pacific warming 1751
Southern Ocean; iron fertilization; Geritol fix refuted 1754
climate, sensitivity, projections; review 1907
Hypsithermal, during; Antarctic Ice Sheet, volume state implications; glaciers, advance 2089
climate, least-cost stabilization 2369
climate; sun, role; report 2384

warming: greenhouse
coral bleaching; role in reef stress unproven; report 616

Washington State
Holocene, 3 events; submergence, sudden, probably coseismic 308
Puget Sound; density intrusions; circulation 1130

waste (See also effluents, spoils, sewage, sludge, tailings; more at POLLUTION ...)

waste disposal (See also disposal, dumping, outfalls, more at POLLUTION ...)
dumping ground; sewage sludge; sediments 2361
seafloor, use and misuse; deep-sea resources; international law 2364

waste disposal: ocean
U.K., monitoring programs, impact assessment, disposal licensing, etc.; pollution monitoring; contaminants, non-radioactive; MAFF report 1988-89 1088
waste disposal products
stabilized coal-waste block; seawater; long-term processes ... 803
waste: hazardous
Law of the Sea; ocean dumping; transboundary movement 1736
water (See also seawater, freshwater-seawater interface; more at OCEAN ...)
ice; clouds; broad band radiative transfer properties 151
water: anoxic
trace elements; filtration, techniques for river, coastal waters 3023
water bodies
emission spectra; seas; oceans; brightness, spectral coefficients; possible applications to remote sounding 1124
water column
light scattering, multiple; angular distribution of the submarine light field 81
shelf, coastal; Baja California, shelf off; trace elements; natural process contributions vs anthropogenic inputs 224
properties; North Pacific, 47°N, 152°W; CTD, and oxygen, nutrient profiles 631
Weddell Sea; metals, Cd, Cu, Co, Ni, Pb, Zn 776
thermohaline structure; North Pacific, NE; Fieberling Seamount, around; flow, mesoscale 1134
New Zealand; Manukau Harbor; light, underwater 1215
Arabian Sea; nitrous oxide 1324
structure; Bering Sea, Anadyr Strait; pycnocline, topography; seabirds, alcid, influence on marine distributions . 1650
upper ocean; laser sounding; dispersive distortion of return pulses 1761
attenuation in; solar radiation 1850
upper; mushroom structures; Fedorov structures, coherent 1876
turbulence, small-scale; microscale profiler 1878
subsurface; Australia, Sydney; organic matter, characterization; air-sea interface; sediments; sewage outfalls 1972
Caribbean area, Nicaragua Rise vs the Bahamas; carbonate minerals; sediments; mineralogy and chemistry 2052
water fluxes: surface
changes in; deep circulation, rapid transitions; relationship .. 17
water: hypoxic
Virginia; Rappahannock River 201
conditions; German Bight; Kiel Bay; nutrients, N, P; plankton 577
episode; Sweden, Gullmar Fjord Basin; Nematoda, changes and slow recovery of assemblage 2706
water: interstitial
natural waters, marine; carbon, DOC stable isotope ratios .. 167
flow; sediments; waves, effects; oxygen, benthic fluxes 202
intertidal; North Sea; microbial mats, influence; metals, heavy, gradients 2766
water mass tracers
conservative; Pacific, intermediate and deep waters; consistent inventory 670
water masses (More at OCEAN ...)
surface warm, subsurface cold; Pacific, W tropical; interannual variations; in Chinese, English abstract 5
major inflows, volume; Baltic Sea; sea level 15
Gulf Stream; Cape Hatteras, N of; North Atlantic, NW; currents 35
North Pacific, W; carbonates, geochemical system, as descriptor and differentiator 37
limits on warm saline bottom water formation; Mesozoic, Late; Cenozoic, Early; nutrients, oceanic distribution; oxygenation 313
association with; Mexico; Gulf of, NW; Foraminifera ... 524
indicators; North Atlantic; Foraminifera, planktic 525
California, N, off; currents; coastal zone, transition; summer 1988 studies 656
exchange; Cadiz; Gulf of; Gibraltar; Strait of; Mediterranean area; mixing; volume transport 672
anomalous, Okhotsk Sea; North Pacific; ventilation, implications 676
Antarctic Intermediate Water path; South Pacific; equatorial flow 677
North Atlantic, E; Cape Verde Frontal Zone, characterized; fronts 678
advection; Weddell Sea, off Kapp Norvegica; particle sedimentation, short-term variability; plankton, biomass, feeding activity; sea ice, cover; relationships 788
subduction; California, N, off; coastal upwelling; phytoplankton, transport 1114
Bransfield Strait, W, region; Antarctica; geostrophic circulation 1132
North Pacific Intermediate Waters; Alaskan Gyre, role; basin ventilation 1137
Pacific Ocean Warm Pool, position; India; monsoon rainfall, summer; relationship 1274
Mediterranean Sea; Otranto Strait; strait flow 1805
deep-water formation; Mediterranean Sea, NW; 3-D numerical study 1816
Angola Basin; South Atlantic; Antarctic Bottom Water 1818
glacial deep-water properties; Pleistocene, Late; Pacific, W equatorial; bathyal thermocline 2094
interactions; Mediterranean Sea, E; chlorofluoromethane; oxygen 2406
deep water formation; Arctic Ocean, from; Norwegian Sea; Greenland Sea; Iceland Sea; saline outflows 2419
Ullung Warm Lens; Korea, off 2420
Korea, off; Ullung Warm Lens; spatiotemporal characteristics 2421
North Atlantic Deep Water; Atlantic; flow, across the equator; volume transport 2423
ice shelves; circulation; ice-ocean interactions modelled ... 2459
tracing, applications to; East China Sea; Kuroshio; alkalinity, surface distribution 2564
relation to; Korea, southern seas; phytoplankton, distribution, composition; in In Korean, English abstract 2688
Benguela Upwelling, system, southern; biota; short-term variability 2856
High-Salinity Shelf Water formation; polar seas 2907
discharged; Gulf Stream; Cape Hatteras, N of 2940
age of deep waters; Arctic Ocean; Canada Basin; primary production, way to estimate 3257
water: pore
uranium, determination by isotope dilution ICP/MS 184
North Sea, Jade region; sand flats; surface moisture; salinity; in German, English abstract 192
nutrients, profiles; deltaic lagoons; benthic fluxes 1975
acetates, concentrations 2555
parameters; marsh sediments, salt; sulfur, reduced, variability 2594
water: precipitable
atmosphere; radiance, IR satellite images, estimates from .. 1898
water quality
remote sensing; eigenvector analysis 1306
Long Island Sound; environmental impact, assessment .. 1731
issues; Europe; pollution monitoring; biomonitoring; report of the ICES Advisory Committee 2868
possible restoration measures; Germany; Darss-Zingst Bodden, chain; eutrophication 3040
criteria, implications for; tin, tributyl; chemical analysis, reliability; seawater 3042
water resources
Massachusetts; Cape Cod; pollution; problems reaching crisis proportions 619
water sampling (More at SAMPLING ...)
water: tropospheric
Northern Hemisphere; Southern Hemisphere; wintertime asymmetry 1255
water vapor
Pacific, W tropical, over; surface temperature; atmospheric convection; relationships 139
mixing ratio; climate, sensitivity 2506
water vapor: atmospheric
circulation modelling; climate; better understanding of water vapor role needed 1749
waters: hazardous
diving; pollution; hypothermia; symposium papers; 16 papers 586
watershed discharges
variations, effects; estuaries; nutrients; chlorophyll 2377
watersheds
from; Long Island Sound; estuaries, to; nutrients, export 2570
waterways: estuarine
projects; navigation, channels, maintenance; CZM 583
wave<s> (See also Beaufort scale, oscillations, sea state, solitons, surf, surges, swash, swells, tsunamis, wind-wave interactions ...)
wave buoys
Wavescan second generation directional buoy 50

wave climate
global; variations throughout the year ... 685
changes; North Atlantic; North Sea; increases in mean wave height since 1950 ... 2912
wave damping
incorporation; internal waves, models ... 74
wave dynamics (More at FLUID DYNAMICS ...)
wave energy
spectral refraction and refraction-diffraction models compared ... 60
wave flumes
in; Stokes drift ... 1178
wave forces
measured and predicted; offshore platforms ... 1723
wave gauges (More at GAUGES ...)
wave height
wind, speed; wind stress dependence on ... 2448
and rock strength, influence; shores; platform scarps, elevation; laboratory approach to the problem ... 3047
wave power (More at POWER ...)
wave prediction
parametric model; hurricanes; comment ... 73
wave recorders (More at RECORDERS ...)
wave scattering
surface roughness ... 1192
wave-current interactions
flow, over rough beds; current shear, stresses and velocities; model ... 723
waveguides; acoustic
surface, layer; transmission techniques ... 84
trapped modes ... 705
scattering matrix and boundary integral equation methods for long-range propagation ... 706
perturbation approach to theory in case of layered bottom ... 1858
sound field, interference structure; random medium influence 1861
sediment layer; sound channels, parameters ... 1862
sound scattering; boundary integral equation methods ... 2463
sound scattering; Rayleigh-Fourier and extinction theorem methods compared ... 2468
wavemakers
the initial value problem; waves, lab studies ... 694
waves
imaging; slope-induced nonlinearities ... 1
grouping effect in irregular wave agitation in harbors; discussion 58
characteristics; Egypt, coast, off; Mediterranean Sea ... 59
spectra; scatterometry, technique for measurement ... 63
steepness-age relationship investigated; in Chinese, English abstract ... 67
direct scattering and WKBJ-Born inverse problem for layered elastic medium ... 68
directional spectra; HF radar measurements ... 69
effects; sediments; interstitial water, flow; oxygen, benthic fluxes ... 202
groundwater, table, responses; run-up ... 254
body, velocities; Adriatic Sea, region; crust ... 407
measurements; radar altimetry; 1978-88 experimental results ... 683
radar scattering; wavelet analysis ... 684
studies; radar altimetry ... 686
short-period, generation; California, Loma Prieta 1989; Moss Landing, Harbor; landslides, as caused; earthquakes, as ultimate cause ... 687
surface, refraction; North Sea; numerical simulations ... 688
finite-amplitude, resonant generation of; stratified fluids; topography, flow over ... 689
weakly nonlinear, evolution; viscosity, presence; surfactants, presence ... 690
attenuation; sediments, soft, by ... 691
radar altimetry; satellites, Seasat observations ... 693
lab studies; wavemakers, the initial value problem ... 694
ripples, instabilities; resonant quartets of the Benjamin-Feir type ... 695
boundary layer models; wind-wave interactions ... 697
Kelvin-Helmholtz and Holmboe, instability and transition ... 729
full-wave solutions; results for slightly rough surfaces ... 1171
radar, SAR, focusing; remote sensing, imagery ... 1174
narrowbanded, frequency downshift in; wind-wave interactions ... 1175
transient axisymmetric; extended KdV equation ... 1179
Caspian Sea; surface slope, frequency spectra ... 1180
combined refraction-diffraction; islands, on; numerical model 1181
new form of the Boussinesq equations with improved linear dispersion characteristics ... 1183
beaches; runup ... 1185
comment on the full-wave controversy ... 1187
directional spectra using buoy azimuth, pitch, and roll ... 1191
Pacific, E central; current shear; variability ... 1232
reflection, measurement ... 1825
groupiness variations in the nearshore ... 1831
singularities; instability, Rayleigh-Taylor ... 1836
currents; flow, combined, velocity distributions in ... 1837
Gulf Stream, effects on ocean waves; currents ... 2432
variance partitioning in the trough; barred beaches ... 2433
mass transport ... 2434
mass transport ... 2435
surface roughness; stochastic model ... 2439
long-term characteristics; India, off Trivandrum ... 2441
nonlinear, traveling; solitons, a front of ... 2443
progressive, due to incomplete wavemakers (barriers); surface tension, effects ... 2444
random, dissipation; eddy viscosity; drag-law models ... 2446
short, riding on long waves; 4th-order Lagrangian ... 2447
height and period; cyclones, within; prediction based on wind speed ... 2450
Scholte-Stonely, related to; acoustics, resonances ... 2467
radar, sea spikes at low grazing angles; lab studies ... 2484
monochromatic; radar imagery; currents; simulation ... 2894
nearshore field; California; Monterey Bay; energy density directional spectra ... 2916
waves; acoustic
travel times; Indian Ocean, S; Heard Island, Experiment; global warming, attempts to measure; lecture by Walter Munk ... 715
time domain analysis of normal mode, parabolic and ray solutions of the wave equation ... 1217
refracted field; response of a directional array ... 1857
attenuation; sound channels, inhomogeneities ... 1873
waves; atmospheric
PNA; North Pacific; surface temperature; interactions ... 142
unstable inertia-gravity; typhoons, development; tropical cyclones; effects on storm development ... 158
clouds, clusters ... 1288
Southern Hemisphere; storms, eddy energy budget; life cycle of a cyclone wave ... 1925
Quasi-Biennial Oscillation; mean zonal flow response to Rossby and gravity wave forcing ... 1926
baroclinic; response to nonuniform thermal forcing at the lower boundary ... 2531
waves; barotropic
internal; Indian Ocean; internal tides ... 76
waves; breaking
run-up ... 1826
and shoaling; shoals, over ... 1830
surface; fractal structure of breaking zones ... 1835
sound, generated by; acoustics ... 1869
bubbles, generation, entrainment; temperature, effects ... 1877
microwave backscatter; detection and verification ... 2437
microwave backscatter; dependence on wind and wave conditions ... 2438
waves; capillary
gravity-; long waves, surface; effect of nonlinear damping on interactions ... 62
waves; edge
LF, relation to; barrier bars; shoreline dynamics, multiple-bar ... 247
nonlinear action in a triad ... 1828
Stokes-mode; shoreline profile ... 2917
waves; equatorial
numerical dispersion relation ... 1189
waves; extreme
statistics, using hindcasts ... 70
and tides, etc.; climatology, use of extreme value statistics ... 1252
waves; gravity
surface, small-amplitude; bathymetry, slowly-varying; chaotic development ... 51
surface; calculating nonlinear energy transfer ... 61
surface; acoustic backscattering, Doppler ... 99
surface; current meters, acoustic Doppler; field verification of measurements ... 1177
porous bottoms ... 1824
surface; cyclostrophic balance ... 1827
surface; capillarity, effects in a cylindrical container; wetting boundary conditions ... 2430
variational approximations ... 2440

waves: gravity capillary
steep; ripples, excitation; numerical simulations 1190
waves: internal
models; wave damping, incorporation 74
2-D propagation 77
trapped, tide-driven; seamounts, large (Fieberling Guyot); flow, over 699
speeds; two-layer hydraulics 1193
universality and diversity in spectra 1195
Japan, N, Sanriku coast; internal tides 1196
weakly nonlinear; evaluating the modulation instability parameters 1838
seabed, shelf; interactions 1839
spatial structure; stratified fluids 1840
scattering; bottom topography, periodic 1841
manifestations; surface, at; surfactants, presence; films, presence 1842
packets; Arctic Ocean; ice flexure 1844
turbulence, microscale, intensification 1881
Arctic Ocean; finestructure, velocity 2451
vorticity; interactions in strongly stratified flows 2452
stratified fluids; Green's function and point sources 2454
vorticity, potential; fluid dynamics, Hamiltonian 2943
waves: internal gravity
spectral modelling 1194
frontal zones; numerical modelling 1197
waves: Kelvin
nonlinear generation 1186
coastal; topography, slowly-varying 2429
waves: long
surface; capillary waves, gravity-; effect of nonlinear damping on interactions 62
fluid dynamics; shear flow; solutions of the Burns condition 121
run-up; international workshop, report 692
Atlantic, tropical, 1984-1990; eddies 696
tidal, elevation; tidal transport; Green's law revisited 2436
propagation onto shelf 2915
waves: Rossby
stationary; boundary currents, extensions 1172
stratified ocean; analysis 1182
mixing, chaotic; vorticity; fluid dynamics 1248
barotropic; fluid dynamics; turbulent diffusion; applications 2942
waves: sand
subtidal dunes; Australia, NE; Torres Strait; currents, wind-driven; dune asymmetry reversal with reversing currents 817
waves: seismic
mantle; predominance of long-wavelength anomaly 420
propagation theory; and synthetic seismograms; report to IUGG 814
arrival time inversion; North Sea; earthquakes, micro- 883
arrival times; North Sea; earthquakes, micro- 884
velocity gradients; mantle, upper 1533
excitation; tsunamis; efficiency of single forces vs double-couples 1573
Lau Basin, beneath; mantle; subduction zones; P-wave velocity anomalies 2149
source radiation patterns; Tonga Trench; subduction zones, beneath; crust, structure, constraints on 2179
long-period, radiation; South Pacific; Macquarie Ridge; earthquakes, 1989; mantle, evidence for coseismic slip? . 2637
P velocity structures; New Hebrides Arc, (Vanuatu), central; subduction zones 2652
Mid-Atlantic Ridge; mantle, upper, temperature and composition; geoid, and depth anomalies; joint data inversion 2653
North Sea, S; observations of shear-wave splitting from VSPs . 3113
waves: shallow-water
intercomparison of truncated series solutions 56
propagation; reflective properties of parabolic approximations . 1173
decomposition of the Boussinesq equations into set of KdV equations 1832
waves: shear
Kurile Arc; earthquakes; seismicity; travel time, amplitude, waveform analysis 901
waves: shoaling
higher-order, variations on 65
lab observations 2914
waves: solitary
associated with; Sulu Sea; internal swash 698
solitons; report 2886
stability 2913
solitons, uses, solutions 3259
waves: sound
internal solitons; acoustics, resonant interactions in the coastal zone 1874
waves: Stokes
wavetrains; 4th-order nonlinear evolution equation in deep water 2431
waves: storm
South China Sea; typhoons; in Chinese, English abstract .. 53
Bengal; Bay of; Arabian Sea; cyclonic model 2449
waves: surface
description in basin of variable depth 57
over rotating fluids; fluid dynamics 66
wave heights; 2-D spectra based on aerial survey data 1823
waves: tectonic stress
global; propagation between 1978 and 1983 2141
waves: topographic
margin, generation over 64
waves: trapped
coastally; scattering 55
waves: tropospheric
Rossby-gravity; atmospheric convection; structure, variation of tropical convection fluctuations 2522
waves: vortex
solitary; stratified fluids, in 1226
waves: wind
long wave cutoff 71
surface, wind stress; relationships 72
swell; pressure, measurements just above the water 1176
organic films, monomolecular, effect of 1188
conversion of inshore spectra to deep-water spectra 1829
directionality; swell, effects on imaging 1834
wax esters (More at ORGANIC COMPOUNDS ...)
weather
Japan summer, unusual; Pacific, W tropical; tropics; relationships 126
ocean-atmosphere interactions; El Niño, ENSO cycle; circulation, ocean and air 1918
climate; predictability 2966
weather forecasting
ice forecasting; sea ice; development of coupled model 1208
tropical cyclones, motion; interactive analysis and forecast system 1291
Arctic area; polar lows; model sensitivity experiments 1949
weather fronts
meteorology, attack on a paradigm; report 3260
weather: global
climate; unlikelihood of low-dimensional attractors 1303
weathering (More at EROSION ...)
weathering: silicate
importance as control; ocean-atmosphere interactions; carbon cycle; oxygen cycle 1350
effects of; atmospheric carbon dioxide; global temperature 1904
weathership stations (Use appropriate station designation)
Webb: Douglas Chester
engineering; biographical sketch 1109
Weddell Sea
margin; Crary Fan; fan sediments 246
S and E; sediments; carbon, organic, and opal; diagenesis, early; in German, English abstract 274
Amphipoda, paramphithoid; Epimeria, n.sp. 510
Copepoda, planktonic; summer distribution, abundance 514
water column; metals, Cd, Cu, Co, Ni, Pb, Zn 776
off Kapp Norvegica; particle sedimentation, short-term variability; plankton, biomass, feeding activity; sea ice, cover; water masses, advection; relationships 788
E; Natantia, shrimp occurrence and distribution 999
transport into; anthropogenic carbon dioxide 1271
N; Pleistocene, upper; diatoms, unusual layers; sediments 1450
E; sea ice, ridging 1848
opening; Antarctica, West; paleomagnetism, Thurston Island; magnetic field; tectonics 2134
winter aggregations in; mammals, marine; seabirds; pack ice 2198
and vicinity; phytoplankton, biomass; zooplankton, proto-, biomass 2221
formation of Ice Shelf Water; Filchner-Ronne Ice Shelf, beneath; thermohaline circulation 2458
ice-covered; Antarctica; zooplankton biomass 2670
sea ice; diatoms, distribution; chlorophyll 2674

epontic algae; photosynthesis, -irradiance relationships; carbon, metabolism ... 2680
invertebrates, C and N isotopic compositions; feeding, diversity, implications for ... 2692
Scotia Sea; biogenic silica, production ... 3201
Weddell-Scotia Confluence
area; Southern Ocean; phytoplankton biomass, and composition ... 2215
West Antarctic Ice Sheet
changes in; ice sheets ... 2456
West Indies
Trinidad, Tobago; Foraminifera, fossil to recent record; Globorotalia, menardii zone, significance ... 329
West Spitsbergen Current
Arctic Ocean; bottom pressure; currents, seasonal variations ... 1806
westerlies (More at WIND ...)
wetlands (More at COASTS ...)
Jamaica; environmental management; development and degradation, redevelopment and preservation ... 3251
whales
reaction; Cetacea; tagging, implanted sonar transponder and radio tags ... 2701
wharf biota (More at BIOTA ...)
Wilson cycle (More at PLATE TECTONICS ...)
wind<s> (See also breezes, easterlies, gales, monsoons, squalls, tradewinds, westerlies ...)
wind
forcing by; circulation, GCMs ... 21
mixing; surface mixed layer; turbulence; effect of horizontal buoyancy gradient on energy budget ... 113
westerly bursts; Pacific, W equatorial; surface heat flux ... 138
forcing by; ocean-atmosphere interactions; circulation, quasi-geostrophic response ... 141
speed, measurements; satellite scatterometry ... 752
strong katabatic; Ross Sea, SW, over; cyclogenesis, mesoscale; relationship ... 760
forcing by; California, central, off; phytoplankton pigments, patterns ... 921
ish larvae, as predators; zooplankton, as prey; turbulence, effects on encounter rates; tides; quantifying effects ... 941
velocity measurements; satellite radar, scatterometry; overview of the NSCAT system ... 1058
large-scale, effect of; breezes, land and sea circulations; numerical investigation ... 1286
Greenland Sea; Norwegian Sea; circulation; salinity, the Great Salinity Anomaly in the 1970s; numerical experiments 1779
North Atlantic; circulation; time and space scales of mesoscale variability ... 1780
and heating, role; Australia; Leeuwin Current, driving forces; Pacific; currents ... 1800
as forcing agent; Atlantic; Pacific; equatorial currents; contrast in seasonal cycles ... 1808
forcing, response to; Newfoundland, NE shelf; ice drift ... 1846
speed, relation to; surface slicks; occurrence frequencies ... 1884
mean; surface temperature; errors due to inadequate sampling ... 1896
vector algorithm; satellite scatterometry ... 1923
clouds, stratocumulus; boundary-layer transition across the cloud edge in a coastal zone ... 1928
speed; wave height; wind stress dependence on ... 2448
ambiguity removal; neural networks, techniques ... 2490
operational production; clouds, motions, from; remote sensing ... 2494
surface; air-sea interactions; stability dependence of the drag and bulk transfer coefficients ... 2519
subtropical, short-term maxima; Southern Hemisphere; circulation, general ... 2528
derived from; clouds, motion; remote sensing, Meteosat ... 2535
speeds; hurricanes; estimating probabilities using empirical model ... 2544
satellite scatterometer, to force GCMs; circulation modelling 2897
low speeds; air-sea interface; heat flux, turbulent, and moisture and buoyancy; surface, fluxes ... 2954
measurements; remote sensing, scatterometer, altimeter; buoy, ship and island data; accuracy ... 2963
wind field
satellite, utilization; climate; global change, studies ... 2527
derivation, improving; satellites, geosynchronous ... 2529
monsoon depressions; clouds, structure ... 2530
wind flow (More at FLOW ...)
wind gusts
over-water; air turbulence ... 751
wind power (More at POWER ...)
wind pumping
ice sheets; firn, through; 3-D theory ... 1201
wind statistics
effects on; North Atlantic; Beaufort scale, equivalent; air-sea interactions, fluxes ... 1253
wind stress
symmetrical; storm surges ... 54
wind stress curl
variability; North Pacific; ocean-atmosphere interactions 1909
wind: surface
South Africa; Algoa Bay, over ... 753
distribution; North Carolina; South Carolina; hurricanes, Hugo, landfall ... 1292
wind waves (More at WAVES ...)
long wave cutoff ... 71
surface, wind stress; relationships ... 72
swell; pressure, measurements just above the water ... 1176
organic films, monomolecular, effect of ... 1188
conversion of inshore spectra to deep-water spectra ... 1829
directionality; swell, effects on imaging ... 1834
wind-driven circulation (More at CIRCULATION ...)
simulations and theory ... 1784
wind-driven currents (More at CURRENTS ...)
stochastically forced model ... 1812
wind-driven flow
circulation; buoyancy ... 11
linear Galerkin solutions ... 2401
and geostrophic; Indian Ocean, tropical; monsoon currents 2411
sea level, VLF variations, calculations ... 2910
wind-driven gyres
3-D structure, ventilation and subduction (U.S. report to IUGG) 641
wind-driven upwelling
coastal; Bengal; Bay of, western boundary; monsoon, SW, during ... 2424
windmills (More at POWER ...)
wind-wave interactions (More at AIR-SEA INTERACTIONS, WAVES ...)
waves, boundary layer models ... 697
waves, narrowbanded, frequency downshift in ... 1175
wire rope (More at ROPE ...)
Wisconsinan
Late, to present; Newfoundland, N, off; sedimentation; organic matter; response to climatological events ... 2035
women
scuba divers; diving physiology; potential risks ... 587
in science, 11 profiled; science ... 2371
science, recruiting nontraditional players; minorities; handicapped, physically disabled ... 3254
wood boring organisms (More at ORGANISMS ...)
work chamber<s> (More at CHAMBERS ...)
world hunger (More at hunger, food ...)
World Ocean (More at oceans ...)
carbon; oxygen; sulfur; interrelationship between temporal trends in isotopic curves ... 220
Quaternary; Foraminifera; Globigerinita, clarkei ... 521
ocean geography; history of research and findings, individual regions portrayed; special volume; in French, English abstract ... 1067
fishery resources; fisheries management; ownership and productivity issues ... 1100
tides, M2 ... 1170
atmospheric carbon dioxide; carbon cycle, global; glaciation, during, pCO_2 reduction ... 1263
over; atmospheric aerosols; sulfates, non-sea-salt, and methanesulfonic acid ... 1301
in; beryllium, isotopes ... 1319
phytoplankton, how many species ... 1615
trace chemistry; atmospheric deposition ... 2510
Stomatopoda, 35 spp., with list of spp. from below 400 m; *Galathea* expedition collection 1950-1952 ... 2814

xenobiotics
fate in; calcareous algae ... 1038
xenoliths
mafic, ultramafic; mantle, metasomatism; magma, depth of origin; basalts, fluid and silicate glass inclusions ... 382

Xenophyophoria
7 taxa: North Atlantic, NE: Rhizopoda: abyssal communities, sediment ... 1015

Yamato Basin
Japan: Sea of: crust, P- and S-wave velocity structure ... 402
Yangtze River
Holocene: China: Yellow River: estuaries, development ... 3068
influence on middle and lower reaches since 12,100 BP: China: sea level, rise ... 3070
Yellow River
Holocene: China: Yangtze River: estuaries, development 3068
Yellow Sea
China: shelf sediments, accumulation ... 266
Bo Hai Sea: radioactivity, in coastal waters ... 1322
Korea, near Kunsan: bacteria, heterotrophic, seasonal distribution and character: intertidal zone ... 2751
Yellow Sea Trough
sediments, origin, structure ... 2599
yellow substance (More at ORGANIC COMPOUNDS ...)
determination in estuarine areas: pH, influence: heavy metals, influence ... 1212
light, absorption: fluorescence, induced, measurements ... 1589
Yucatan Peninsula
off: North Atlantic, SW: Isopoda, cirolanid: Bathynomus, giganteus, biology ... 1002
Cretaceous-Tertiary boundary: Mexico: Chicxulub Crater: impact craters ... 1428
from firepit on: Mexico: sea level, curve ... 1746
Yugoslavia
Krka River, and Estuary: arsenic: selenium ... 1995

Zaire River (See also Congo River)
zinc
Appendicularia, retention in houses: cadmium ... 1347
Bothnian Sea: Baltic Sea, N: Mytilus, edulis: cadmium ... 2315
labile: copper, labile: monitoring in estuarine water using cathodic stripping chronopotentiometry ... 2562
measurement variability: Bivalvia: Crassostrea, virginica: baseline ... 2843
Brazil, coastal region: pollution: cadmium ... 3036
zonal currents (More at CURRENTS ...)
variations: Pacific, central tropical: sea level, dynamic height data 1970-1987 ... 2415
zonal flow
forced: stability criteria: fluid dynamics ... 118
zonation
patterns: sandy shores ... 434
analysis: Australia, NE, Endeavour River: species sequencing: mangroves ... 481
vertical: Black Sea: pelagic ecosystems ... 1619
zonation: intertidal
Anomura: Petrolisthes, spp., distribution ... 512
zones (See also aphotic-, photic-, surf-, swash-, tectonic- and tidal zones: more at ATMOSPHERE, LITHOSPHERE, OCEAN, SEDIMENTS, FRONTS, GRADIENTS, INTERFACES, LAYERS, STRUCTURE ...)

zoobenthos (More at BENTHOS ...)
Kamchatka, off: metals, transition: gas hydrates, seeps ... 1703
of 'desert' and transitional zone above: Baltic Sea: Gotland Basin, floor and slope: benthic deserts ... 2249
zoobenthos: sublittoral
Antarctica: Amphipoda ... 2813
zooplankton (More at PLANKTON ...)
abundance: acoustic backscattering, ADCP ... 443
micro-: Chesapeake Bay: Ciliata, guilds ... 928
production, implications for: phytoplankton, chemical composition ... 930
as prey: ish larvae, as predators: turbulence, effects on encounter rates: wind: tides: quantifying effects ... 941
Copepoda, as prey: Euphausia, lucens, as predator: carnivory, selective ... 1005
Calanoida: Cyclopoida: long-term experiments on interactions ... 1012
Calanoida: Cyclopoida: phytoplankton: short-term experiments on interactions ... 1013
littoral, responses: acids, stress: aluminum, stress: laboratory bioassays ... 1036
vertical distribution: Japan: Sea of, Toyama Bay: Copepoda 1594
diel patterns and emergence: India, Laccadive Islands: coastal lagoons ... 1600
Tunicata, pelagic: high-resolution vertical profiles ... 1608
small: mass, volume, density, and weight in water determinations 1611
crustacean, food sources: bacteria, importance: microalgae, importance ... 1621
migration, diel vertical: predators, rapid response to ... 2209
proto-, biomass: Weddell Sea, and vicinity: phytoplankton, biomass ... 2221
Copepoda, co-occurring, do they compete?: feeding ecology 2231
mesoplankton: Black Sea: factors determining position of lower layer ... 2232
Copepoda, life cycle stages: phosphorus metabolism ... 2279
populations, differentiation: Greece: Thermaikos: Gulf of: pollution, presence of ... 2335
Brazil, Rio Grande do Norte: oil platforms, around ... 2693
seasonal variation and production: Korea, Chonsu Bay ... 2694
meso-, abundance, distribution, production: Benguela Upwelling, S: Copepoda: Calanoides, carinatus ... 2697
Benguela Upwelling, S: Copepoda: Calanoides, carinatus, fecundity ... 2798
biomass: Baltic Sea, trend analysis: chlorophyll: productivity: transparency, water ... 3149
zooplankton biomass
meso-: distribution patterns ... 446
bioluminescence: bathypelagic zone ... 1613
Antarctica: Weddell Sea, ice-covered ... 2670
eutrophication, different stages: seasonal variations ... 3155
zooplankton communities
France: Biscay: Bay of: annual cycle of abundance, composition, size spectra ... 456
California Current: pattern associated with a cold filament ... 940
zooplankton: demersal
Barbados: coral reefs: plankter patchiness and composition ... 2217
zooplankton: gelatinous
Benguela Current, ecosystem: advection, large-scale, effects 2222
zooplankton grazing
Ceratium, bloom decline: diatoms ... 3158
zooplankton herbivory
microalgae, development as tracer particles ... 2691
zooxanthellae
pattern and rate of release: Pocillopora, damicornis: corals: N-enrichment vs normal conditions ... 2793
Zostera
marina, eelgrass beds: Decapoda: Ulva, lactuca, sea lettuce beds: fish, epibenthic: marsh creeks: habitats comparison 2252

AUTHOR INDEX

to Oceanographic Literature Review,
1992, Vol. 39(7-12), pp. 533-1051
citations 92:3263-92:6530

Note that the leading numerals '92' are omitted from the access numbers; also note that, strictly speaking, this is an index of names, not authors—if an author's name has appeared two ways in the literature, it may appear two ways here. Finally note, if doing multi-year searches, that through Volume 36 annual cumulative indexes were published. In Volume 37 there are four quarterly non-cumulative indexes to search; from Volume 38 forward, two semiannual non-cumulative indexes are provided.

Aakjær, P.D. 4594
Aarseth, Inge 3605
Abbott, D.H. 5370
Abdel-Moati, A.R. 3498, 3506
Abdine, S. 5326
Abe, Katsuyuki 4456, 4796, 5963
Abe, Kuniaki 3896
Abele-Oeschger, Doris 5970
Abelmann, Andrea 4022
Able, K.W. 6478
Abrahamsen, N. 5357
Abrams, M.A. 5964
Abrams, P.A. 4243
Abrashkin, A.A. 3307
Abril, J.M. 3524, 5184
Accerboni, Ezio 6182
Aceituno, Patricio 5134
Ackerman, Diane 3843
Ackley, S.F. 3359
Adabi, M.H. 5299
Adams, J.B. 5560
Adams, J.M. 6521
Adams, R.D. 4732
Ærtebjerg, Gunni 4866
Afanas'yev, Ya.D. 3849
Afeti, George 4534
Agatova, A.I. 4034
Agrawal, P.K. 5918
Aguilar, Alex 3798
Aharon, Paul 4797, 5870
Ahel, M. 5533
Ahern, J.A. 4040
Ahlborg, U. 3820, 4337
Ainley, D.G. 5519
Ainsworth, N.R. 4112
Ajao, E.A. 4299
Akagi, Tasuku 6277
Akhmedov, L.N. 3366
Akimoto, Hajime 6271
Akitomo, Kazunori 4526
Aksnes, D.L. 4844
Aksu, A.E. 5338, 5879, 6354
Alabaster, Tony 3637
Alagarsamy, R. 5802
Al Ani, S. 3536
Albaigés, J. 4652
Alberts. J.J. 5188
Alden, R.W. III 5797
Alder, V.A. 4300
Aldinger, W.T. 6514
Aldrich, D.V. 6043
Alekseyev, V.V. 4566, 4605
Alerstam, Thomas 6482
Alexander, C. 5273
Alexander, G.D. 5160
Alexander, P.W. 3467
Alexander, S.K. 6083
Alexandrou, D. 4490
Al-Hinai, K.G. 4965
Alino, P.M. 6011
Aliyev, T.A. 5600
Allan, T.D. 5597
Allard, Richard 3364
Allègre, C.J. 5282
Allen, J.A. 4276
Allen, J.R.L. 4068
Allen, P.A. 5317
Allen, W.H. 5602
Alley, R.B. 3322
Allison, Ian 3437
Allmendinger, R.W. 3661
Al'mukhamedov, A.I. 4140
Alongi, D.M. 4996, 5503, 6029
Alonso de Pina, G.M. 3769
Alpert, P. 4603
Alpert, Sy 6126
Altabet, M.A. 4628
Altenbach, A.V. 6051
Altermann, Wladyslaw 3639
Altherr, Rainer 5445
Alvarez Borrego, Saúl 3426
Alvarez-Borrego, Saul 3706
Alves, J.O.S. 5785
Amano, Kazuo 3603
Ambrose, W.G. Jr. 4246
Amin, M. 5690
Amín, O.A. 4322
Aminzadeh, Fred 3374
Ammerman, J.W. 4264, 4265
Amos, C.L. 6332
Amouroux, J.-M. 6468
An, K.-H. 5994
An, Zhensheng 6328
Anastasiou, K. 4451
Anctil, F. 5599
Anderlini, V.C. 4940
Anderson, Alun 3842, 5619
Anderson, D.L. 6390
Anderson, D.L.T. 4403
Anderson, D.M. 4201, 4202
Anderson, I.H. 4912
Anderson, L.G. 3888, 5185
Andrady, A.L. 4978
André, Carl 4181
André, J.M. 3800
André, J.-M. 6448
Andréani, A.-M. 3772
Andrews, J.C. 4081
Andrews, J.T. 3571
Andrianova, O.R. 4527
Andronova, N.G. 5589
Ang, P.O. Jr. 4305
Angell, J.K. 4567, 4585
Anikeyeva, L.I. 4805
Annapurna, K. 5211, 6296
Ansari, Z.A. 6019
Antoine, J.Y. 6147
Antoine, L.A.G. 6391
Aoki, Shigeaki 3286
Aoki, Takashi 3979
Aono, Tatsuo 3993
Aota, Masaaki 4404
Apel, J.R. 6215, 6244
Aplonov, S.V. 4118
Appelgate, Bruce 6405
Appenzeller, Tim 6133
Apperson, K.D. 5417
ap Rheinallt, T. 3823
Arashkevich, E.G. 6454
Archer, D.E. 3572
Aredov, A.A. 4491
Arenas Fuentes, V. 3496
Argus, D.F. 3630
Arimoto, R. 5774
Arístgui, Javier 3690
Aristov, S.N. 6158
Arkani-Hamed, J. 6374
Arkani-Hamed, Jafar 5368
Arkhipova, L.D. 4089
Arkin, Phillip 5125
Armijo, R. 5910
Arnaud, P.M. 6012
Arnault, Sabine 5021
Arntz, W. 5508, 6471
Arntz, W.E. 6049
Arrigo, Kevin 5085
Arsen'yev, S.A. 6230
Artem'yev, V.A. 6224
Asbjörnsdóttir, L. 3593
Asch, M. 3370
Asher, W.E. 5823
Ashkenazi, V. 5904
Askne, Jan 6217
Asper, V.L. 6292, 6293
Astraldi, M. 6159
Atema, Jelle 3809
Attar, K.M. 4941
Augustinus, P.G.E.F. 5273
Aure, Jan 4825
Aynemer, A.I. 4090
Ayyakkannu, K. 6018, 6131
Azam, Farooq 4264, 4265
Azetsu-Scott, Kumiko 6294
Babanin, A.V. 4463
Babenerd, Brigitta 5568
Babin, M. 3691
Babu, C.P. 5295
Babu, V.R. 5641
Bäck, S. 5561
Bäcker, Harald 4102
Backus, R.H. 4875
Bada, J.L. 5189
Badan-Dangon, Antoine 6197
Baden, D.G. 3684
Badulin, S.I. 4467
Baev, S.A. 3433
Baeyens, W. 3545
Bagheri, S. 5590
Bahulayan, N. 5037, 5695, 6160, 6173
Bai, Quan 6406
Baik, J.-J. 3449
Bailey, J.C. 5937
Bain, A.D. 6286
Bain, Bonnie 4279
Baird, R.W. 4243
Bajdik, C.D. 5495
Bakan, S. 6254
Baker, E.K. 4647
Baker, E.T. 4680
Baker, K.S. 4632, 5772
Baker, P.A. 4681
Baker, T.F. 5904
Bakker, S.A. 5822
Baksi, A.K. 5358
Bakun, A. 5614
Bakun, Andrew 3441
Balch, William 4194, 4826
Baldwin, R.B. 5632
Ballance, P.F. 3537
Ballesteros, Enric 4306
Balling, R.C. Jr. 3952, 3985
Balls, P.W. 3466
Balopoulos, E.Th. 5678
Balsam, W.L. 5854
Balson, P.S. 6325
Banda, Enric 6318
Bandy, A.R. 5792
Bandyhyopadhayay, Somnath 4074
Banfield, J.D. 5713
Banno, Shohei 5938
Banse, K. 3941
Banse, Karl 5452
Banta, G.T. 5849
Baptista, A.M. 5057
Barabas, Michael 4058, 4061
Barashkov, A.I. 6230

Barber, D.G. 4177
Barber, R.T. 3502, 3815, 5453
Barcina, Isabel 4904
Bareille, Gilles 4105
Barenblatt, G.I. 4538
Barghigiani, C. 4942
Barker, Fred 5939
Barnard, J.L. 3770, 3771, 3776, 3786, 3787, 3788
Barnard, P.C. 5435
Barnes, C.E. 3546
Barnett, T.P. 5741
Barria de Cao, M.S. 4929
Barrie, J.V. 4658
Barron, E.J. 3581
Bartlein, P.J. 5885
Bartlett, D.H. 4266
Barton, I.J. 5635
Bartrina, M.T. 6377
Bartsch-Winkler, Susan 5880
Bartzokas, A. 3411
Basker, G.A. 5904
Basu, Sujit 5237, 5241
Bates, T.S. 5768, 6267
Batiza, Rodey 5923
Baturin, D.G. 4141
Baturin, G.N. 3675, 3997, 4174
Baud, A. 3636
Bauer, J.E. 6299
Baumert, Helmut 4539
Bautista, B. 5975, 6449
Bavestrello, Giorgio 4882
Bayer, Reinhold 3859, 3869
Bayler, Gail 6272
Bayona, J.M. 4652
Bazhenov, M.L. 4710
Beach, R.A. 5250
Beadle. S.C. 3614
Beardsley, R.C. 3291, 4406
Beck, P.J. 4346
Becker, Keir 5310, 5369
Beckley, L.E. 6047
Beets, D.J. 5251
Behrendt, J.C. 3623, 6319
Behrmann, J.H. 4103
Bei, Flora 4897
Beier, J.A. 3505
Belavina, Yu.F. 4792
Belberova, D.Z. 3897
Belderson, R.H. 3543
Belevolenskaya, Ye.B. 4806
Beljaars, A.C.M. 5172
Belk, Denton 5543
Bell, D.R. 4755, 6526
Bell, R.E. 6407
Bellan-Santini, Denise 4289
Belloul, M.B. 5603
Belobrov, A.A. 4468
Belousov, A.V. 4492
Belyaev, V.I. 4827, 5622
Belyayev, K.P. 4568
Belyayeva, N.V. 4114
Belzile, Nelson 4000
Belzons, Max 5076
Benassi, G. 4917
Ben-Avraham, Zvi 5411, 5865
Benditt, John 4989
Benfield, M.C. 6043
Benilov, E.S. 5116
Benner, Ronald 4082, 4627
Bennett, A.F. 4388
Bennett, D. 6073
Benoit, P.H. 4812
Benz, H.M. 5434
Benzhitskiy, A.G. 4828
Beovich, E.K. 6013
Berbery, E.H. 3974
Bercovici, David 3926
Bergametti, G. 5775
Berger, A. 4106
Berger, G.W. 4030
Berger, J.O. 4964
Berger, Paolo 6182
Berger, W.H. 5347, 5454
Bergman, M.J.N. 5504
Berkhout, B.V. 4495
Berkman, P.A. 4704
Berko, H.N. 5770
Berkovits, L.A. 4174
Berlamont, J.E. 3561
Berner, R.A. 4688, 5213
Bernhard, J.M. 5555, 5556
Bersch, Manfred 4389
Bertness, M.D. 6139
Bertotti, L. 4606
Bertrán, C. 6472
Betts, A.K. 5135
Betts, J.N. 4035
Beukema, Jan 3992
Beydoun, Z.R. 5327, 5436, 5446
Beyth, M. 4149, 4727
Bhikharidas, A.K. 6026
Bianchi, G. 6006
Bice, D.M. 4107
Bicego, M.C. 4623
Bich, O.V. 4806
Bideau, Daniel 5940
Bigg, G.R. 4569
Biggs, D.C. 4195
Bildstein, K.L. 6289
Billard, Roland 4326
Billington, Neil 4328
Bindoff, N.L. 5136, 6238
Bingham, F.M. 4570
Binnerup, S.J. 3752
Birchfield, G.E. 3948
Bird, D.F. 3753, 4223
Birger, B.I. 3652
Birnie, P.W. 3838
Bisagni, J.J. 4385
Bisćan, Jasenka 4032
Biscaye, P.E. 5816
Bischoff, J.L. 3570
Bishop, G.C. 4493
Bishop, J.K.B. 4427, 4628, 4632
Bishop, P.E. 4271
Biswas, Satyajit 4728
Bitterman, Haim 3819
Björck, Svante 5881
Björklund, K.R. 6056
Bjo!rlykke, Knut 6443
Björnsäter, B.R. 4932
Black, K.P. 4443, 5252, 5269
Black, M.L. 5762
Black, R.A. 5763
Blackburn, T.H. 4249
Blackstone, N.W. 4280
Blackwelder, P.L. 4867
Blaha, John 5648
Blair, N.E. 4639, 5818
Blanchard, G.F. 4934
Blanchot, Jean 4196, 6462
Bloemendal, J. 5359
Blomenhofer, Helmut 5907
Blomley, J.E. 3265
Blomqvist, Sven 6109
Blood, Elizabeth 6289
Bloom, Peter 4873
Bloomer, Sherman 6134
Bloomfield, Peter 5128, 6239
Blum, N. 5912
Blyth, A.M. 3445
Blythe, R.F. 5667
Bocharova, N.Yu. 4118
Bock, Yehuda 4762
Boczar-Karakiewicz, Barbara 5254
Bode, A. 6450
Bode, Antonio 6456
Bodechtel, J. 5591
Bodergat, A.-M. 3772
Bodge, K.R. 4069
Bodhaine, B.A. 5776
Boehlert, G.W. 5455
Boehm, Gualtiero 4498
Boelskifte, Søren 4945
Boespflug, Xavier 5392
Bogdanov, V.Ye. 4532
Bogomyagkov, A.P. 6369
Bohannon, R.G. 4129
Bohle-Carbonell, Martin 3810
Bohrmann, Gerhard 4083
Bojanowski, Ryszard 4323
Bokuniewicz, Henry 3538
Bolalek, Jerzy 5742, 5819, 5820
Boldrin, A. 5270
Bollens, S.M. 6044
Bologa, A.S. 3793
Bol'shakov, A.M. 4621
Bolt, B.A. 4142
Bolt, Bruce 5624
Bölter, Manfred 4013
Boltovskoy, Demetrio 4197, 4300
Bomber, J.W. 6068
Bonatti, E. 5412
Bond, N.A. 3444
Bone, Y 4091
Bonin, P. 6080
Böning, C.W. 5105
Booij, Kees 5214
Booth, C.R. 5095
Bordin, Guy 3507
Borg, Hans 6109
Borgia, A. 5924
Borgman, L.E. 6206
Borkar, M.D. 6336
Bormans, Myriam 6225
Borodina, E.L. 4494
Borodkin, S.O. 6290
Borole, D.V. 6360
Borrell, Assumpció 3798
Borrull, F. 3468
Borum, Jens 5565
Bosch, Delphine 4155
Bose, P.D. 4074
Bosscher, Hemmo 4664
Bosselmann, Annette 5505
Botello, A.V. 6074
Botsford, L.W. 4921
Bott, F.W. 5437
Böttger-Schnack, Ruth 5544
Bottjer, D.J. 6339
Botz, Reiner 4083
Bouchet, Philippe 4883
Bouchon, Claude 5449
Boucot, A.J. 3631
Boudon, Georges 5410
Bougault, Henri 5940
Boughriet, A. 5206
Bouhier, M.-E. 3372
Boulanger, Yu.D. 5413
Bouloubassi, Ionna 4648
Bourgoin, B.P. 3804
Bourke, R.H. 5667
Bourlès, D.L. 5871
Bower, A.S. 3898
Bowman, M.J. 5038
Bowyer, J.K. 5840
Bowyer, P. 5115
Boyd, A.J. 4396
Boyd, S.H. 4872
Boyle, E.A. 5882
Braconnot, J.C. 5479
Bradley, J.S. 6028
Bradshaw, A.L. 3489
Braginsky, S.I. 4711
Braham, H.W. 4874
Brambata, Antonio 6337
Brambati, Antonio 6511
Bramer, B.J. 5155
Brand, L.E. 5456
Brandt, Angelika 6050
Branica, Marko 3998, 4001
Brassard, Pierre 4026
Brassell, S.C. 5330
Braun, Gunther 6108
Braun, J.G. 3266, 3692
Bravo, A. 6472
Bray, T.F. Jr. 5841
Breen, N.A. 6350
Breen, Nancy 4143
Breen, Nancy A. 6338
Brenning, Ulrich 3774
Bréon, F.M. 3951
Bretherton, C.S. 6235, 6240
Brettar, Ingrid 3508, 6483
Brewer, P.G. 3489, 6285
Briegleb, B.P. 6243
Brigaud, F. 3622
Brigham-Grette, J. 5318
Brimberg, Sisse 4339
Brock, J.C. 3693, 6153
Broecker, W.S. 3573, 4368, 5215, 5225, 6140
Broenkow, W.W. 5457
Brokaw, N.V.L. 4192
Bronk, D.A. 3694
Bronshtein, Alexander 4514
Brooke, G.H. 3381
Brooks, D.A. 5691
Broome, S.W. 4071
Brophy, J.G. 5402
Brørs, Bård 6226
Brosche, Peter 4352
Broutman, D. 3860
Brouwer, Peter 3381
Brouxel, Marc 5932
Brown, Betsy 4257
Brown, J.W. 3314
Brown, M.G. 5101, 5102
Brown, O.B. 4427
Brown, R.A. 3410
Brown, R.D. 3462
Brown, V.M. 5621
Brown, W.S. 5649, 6095
Brownlee, D.C. 4304
Bruce, M.P. 3371
Bruce, N.L. 3773
Brügmann, L. 4650
Bruland, K.W. 5458
Brummer, G.J.A. 5883
Brundrit, G.B. 3303
Brune, J.N. 5852
Brunner, C.A. 5319
Brusa, R.S. 6246
Brusilovskiy, Yu.V. 6370
Bryan, G.W. 4943
Bryan, Kirk 5036, 5130
Bryant, E.A. 4703
Buatier, M.D. 5281
Buat-Menard, P. 5769
Bucha, V. 3417
Buchan, S.J. 3881
Buchberger, W. 3467
Buck, K.R. 4930, 4935
Buck, W.R. 6407
Buckingham, M.J. 4495
Buckley, D.E. 3517
Budd, W.F. 3323
Budich, R.G. 5105
Buesseler, K.O. 3386
Buffett, B.A. 4756
Buffler, R.T. 4679, 5868
Buforn, Elisa 4134, 4167
Buhay, W.M. 4052
Bull, J.M. 6408
Bullister, J.L. 3869
Buma, A.G.J. 4006, 5459, 5976
Bunchuk, A.V. 4496
Buonnacorsi, G.A. 4814
Buravtsev, A.A. 4786
Burdige, D.J. 4640
Burdin, K.S. 4933
Burger, Joanna 6070
Burkill, P.H. 4928
Burnett, Chris 5285
Burnett, M.S. 6410

Burnett, W.H. 5157
Burns, K.A. 4623
Burns, S.J. 4681
Burov, B.A 3913
Busch, Andreas 3774
Bushnell, M.H. 3389
Buss, L.W. 4280
Busse, F.H. 4541
Bussmann, I. 4267
Bustillos Guzman, J.J. 3718
Busto, O. 3468
Butler, Alison 5530
Butler, J.H. 3457
Butterworth, D.S. 6519
Button, D.K. 3799
Butuzova, G.Yu. 4092
Bye, J.A.T. 3949
Bykov, V.G. 4497
Byrne, D.E. 3653
Byrne, R.H. 4003
Byrne, Tim 5376

C.L. Davis 5523
Cabal, J. 6375
Cabrini, Marina 6451
Cacchione, D.A. 3917
Cadée, G.C. 4861, 5460, 6045
Cadien, D.B. 4281
Cadiou, Y. 4947
Caflisch, Lucius 6127
Cahet, G. 3754
Cahet, Guy 6468
Cahoon, D.R. 4261
Caillet, G. 3622
Cairns, S.D. 5538
Cajaraville, M.P. 5585
Calais, Eric 4729
Caldeira, Ken 6353
Caldwell, D.R. 3392
Calhoun, J.A. 6267
Calkins, D.G. 5575
Calmet, D. 3800
Calvert, S.E. 5803
Camacho-Ibar, V.F. 4043
Camoin, G.F. 3574
Campbell, K.J. 3818
Campbell, Todd 3484
Camplin, W.C. 4973
Canas, J.A. 6409
Candela, Julia 3291
Canérot, Joseph 3624
Cang, Shuxi 6052
Canino Herrera, S.R. 3695
Cann, J.R. 4754
Cannat, Mathilde 5940
Capinski, Marek 4540
Capone, D.G. 5220, 5520
Carbotte, Suzanne 5941
Cardona Canizales, Carlos 3696
Caress, D.W. 6410
Carey, W.M. 3385
Cariou, Claude 4450
Carleton, A.M. 4607
Carlson, L. 4314
Carlucci, A.F. 5521
Carmouze, J.-P. 3803
Carnes, M.R. 5680
Carnevale, G.F. 3387
Carpenter, E.J. 4198
Carpenter, K.E. 6110
Carpenter, P.D. 5216
Carpenter, S.J. 5853
Carpine, Christian 4353
Carr, L.E. III 5162
Carr, M.-E. 3268
Carrington, D.J. 3270
Carrion, Philip 4498
Carsey, Frank 3324
Carter, C.H. 5841
Carter, Everett 5668
Carter, K. 4169
Carter, L.D. 5318
Carter, R.A. 3274
Carter, W.D. Jr. 4639
Caruso, H.A. 5063
Caruthers, J.W. 4499
Carver, G.A. 3625
Casanova, Bernadette 3775
Casassa, G. 3325
Casey, M. 6107
Cashman, S.M. 5371
Casso, S.A. 3386
Castel, Jacques 5467
Castellón 3292
Castillo, Enrique 6104
Castro Longoria, R. 5804
Catalano, Raimondo 3615
Cats, G.J. 3464
Caughey, M.E. 5826
Cauwet, G. 4002
Cavaleri, L 4606
Cayan, D.R. 5124, 5137
Cayula,J.-F. 3850
Cebrián, Just 5000
Cecchi, Philippe 5991
Cedhagen, Tomas 4301
Cerdà, V. 3488
Cerniglia, C.E. 4906, 4907
Cerveny, R.S. 3952
Cessi, Paola 4405, 5650
Chahine, M.T. 4333
Challa, Malakondayya 6260
Chambers, R.M. 5787
Chan, L.H. 4742
Chan, T.-Y. 5545
Chandrakaran, S. 5864
Chandramohan, P. 5064, 5253, 6199, 6324
Chang, Jeng 4198
Chang, Man 5015
Chanier, Frank 5372
Channell, J.E.T. 3678
Chant, L.A. 4093
Chapalain, Georges 4444, 5254
Chapin, T.P. 3469
Chapman, A.R.O. 5563
Chapman, D.C. 5083, 5106
Chapman, D.M.F. 5096
Chapman, R.D. 6215
Chaproniere, G.C.H. 5349
Chardy, Pierre 6014
Charles, C.D. 3418, 4689, 6366
Charlson, R.J. 3942, 5823
Charlton, T.R. 3632
Charriaud, Edwige 3880
Chase, Valerie 4990
Chashechkin, Yu.D. 4544
Chassignet, E.P. 6161
Chatillon, Jacques 3372
Chaumet-LaGrange, M. 6086
Chave, A.D. 6175
Chavez, F.P. 3502, 5453, 5461, 5469
Chayes, D.A. 5248
Checkley, D.M. Jr. 4199
Chelliah, Muthuvel 5125
Cheminée, J.-L. 3640
Chen, C.F. 3388
Chen, Changming 4193
Chen, Changsheng 4406
Chen, Dake 3858
Chen, Falin 3388
Chen, Hanzong 5869
Chen, Ping 3394
Chen, R.F. 5189
Chen, S.T. 6314
Chen, Suitian 5393
Chen, Wei 5056
Chen, Y.J. 5942
Chen, Zhimin 4633
Cheng, Abe 6216
Cheng, C.H. 6348
Cheng, Guangfen 6053
Cheng, Lanna 6039
Cherkis, N.Z. 5248, 6341
Cherniawsky, Josef 3861
Chernova, T.G. 4798
Cheruy, F. 3413, 3414
Chervin, R.M. 5033
Cheung, Y.K. 6212
Chevallier, L. 4743
Chew, Frank 3389
Chia, F.-S. 3739
Child, C.A. 6494
Chin, C.S. 4618
Chisholm, S.W. 5217
Cho, B.C. 5522
Cho, K.-D. 5642
Cho, Peter 5043
Choa, J.-H. 4852
Choi, H.-M. 5604
Choi, J.-H. 6176
Choi, J.-K. 5462
Choppin, G.R. 3999
Chou, L.M. 3738
Chou, M.-D. 5126
Chouker, A.C. 5366
Christensen, D.H. 6435
Christeson, G.L. 5414
Christie, D.M. 3575
Christoffersen, Alice 4225
Christoffersen, Kirsten 3762
Chu, D. 5463
Chu, P.-S. 3442
Chuang, W.-S. 6177
Chung, C.-S. 5464
Chung, H.M. 6442
Chung, T.W. 4144, 6411, 6412
Church, J.A. 5136
Church, M.A. 6329
Church, T.M. 3512
Chyba, Christopher 3847
Ciais, P. 5884
Cicerone, Ralph 6262
Cid S., Luis 3953
Cifuentes, L.A. 4012
Clague, D.A. 5394
Clancy, R.M. 3851, 5651, 6513
Clark, J.D. 6322
Clark, J.F. 4974
Clark, R.B. 4338
Clark, S.B. 3999
Clarke, A. 6049
Clarke, A.J. 4435
Clarke, Andrew 4829, 6046
Clarke, S.H. Jr. 3625
Claud, Chantal 4595
Clausen, O.R. 6431
Clayson, C.A. 5669
Clegg, D.R. 3827
Clemens, S.C. 3576
Clement, B.M. 4712
Clements, L.A.J. 4178
Clever, R.M. 4541
Cliff, Geremy 5011
Clifford, N.J. 3918
Clifford, P.M. 4052
Clift, S. 5127
Clin, M. 4130
Cloetingh, S. 6388, 6437
Cloetingh, Sierd 6430
Cloos, Mark 6413
Cloud, R.M. 5604
Cluzel, Dominique 5373
Coale, K.H. 3469, 4618, 5465
Coates, A.G. 6378
Coble, P.G. 3697
Cochlan, W.P. 5466
Cochonat, P. 5442
Cochran, J.K. 3546
Codd, G.A. 6065
Codignotto, J.O. 4070
Codispoti, L.A. 3476
Cognetti, C. 6111
Cognetti, G. 4944
Cointe, Raymond 4444
Coleman, C.O. 3776
Coleman, Max 4666
Coleman, P.J. 5390
Coleman, R.G. 5415
Coll, J.C. 6011
Collins, J.C. 5561
Collins, L.B. 4108
Collins, M.B. 3539
Collins, M.D. 4500
Collins, Michael 6334
Collins, Pamela 4026
Collins, W. 6528
Collos, Y. 4830
Colls, J.J. 6515
Commeau, J.A. 5298
Condie, S.A. 3390
Conley, D.C. 6200
Conley, D.J. 5977
Conover, R.J. 4863
Console, R. 3654
Cookson, L.J. 3777
Coon, N.C. 5575
Cooper, A.K. 4730
Cooper, C.K. 3874
Copestake, Philip 5336
Copley, N.J. 4872
Coppedge, M.L. 5854
Corbin, J.H. 6097
Corkeron, P.J. 4876
Corliss, B.H. 5354
Cornell, H.V. 4962
Cornett, R.J. 4093
Cornew, S. 6047
Cornillon, Peter 3275, 3850
Corripio, B.M. 5754
Ćosović, B. 4005
Cossa, Daniel 3821, 4044, 6071
Costa, L.C. 5248
Cota, G.F. 5978
Cottrell, M.T. 4268
Coulon, Christian 6398
Courp, Thierry 5344
Courtney, S. 3431
Coutelle, A. 4131
Covert, D.S. 6269
Cowan, E.A. 5022
Cowen, J.P. 5874
Cowie, G.L. 5190, 5803
Cox, C.S. 3852
Coyle, K.O. 4283
Craddock, J.E. 4875
Craft, C.B. 4071
Crane, R.G. 3947
Crathorne, B. 4651
Craven, D.B. 5521
Crawford, D.W. 5553
Crawford, R.J.M. 3686
Crawford, W.R. 5038
Creager, K.C. 4757
Creamer, D.B. 5065
Cresser, M.S. 6276
Cressie, Noel 4329
Cresswell, G.R. 3871, 4416, 6455
Crewell, Susanne 3427
Cripps, G.C. 4818
Crisciani, Fulvio 3428
Cronin, Meghan 5668
Cronkite, D.L. 4184
Cross, A.M. 4975
Crossley, R. 5320
Crowley, T.J. 4109
Croxall, J.P. 4979, 6028
Crutzen, P.J. 3421
Cui, Maochang 5728
Cullen, J.J. 3698, 5199
Cullen, M.J.P. 4589
Culliton, B.J. 6518

Culliton, J.J. 4347
Culotta, R. 4758, 5943
Culver, S.J. 5319
Cumming, E.H. 6354
Cummins, P.R. 4145
Cunningham, Alexander 4814
Cunningham, C.W. 4280
Cunningham, J.R. 6502
Curran, P.J. 4633
Curry, J.A. 4602
Curry, W.B. 3606
Curtsinger, Bill 3843
Cushing, D.H. 4831
Cushman-Roisin, B. 4335, 4474
Cushman-Roisin, Benoit 4390, 4399
Cutland, Nigel 4540
Cutler, A.H. 5898
Cutter, G.A. 3478
Cuzin-Roudy, Janine 6048
Cypionka, Heribert 6033

Daan, R. 4848
Dade, W.B. 5855
Daehnick, A.E. 6064
Daelemans, F.F. 5569
Dafner, E.V. 5191
Dagbert, Michel 5644
Daher, M.A. 4875
Dahlgaard, Henning 4945
Dahms, H.-U. 4918
Dalby, J.E. Jr. 5506
Dally, W.R. 5066
Dalrymple, R.A. 5698, 5842
Dalrymple, R.W. 5846
Daly, K.L. 4919
Dalziel, I.W.D. 3631, 5919, 6392
Dalziel, J.A. 5177
Danaher, S. 6510
Dando, P.R. 5625
Dandonneau, Y. 4832
Dandonneau, Yves 6452
Daniels, R.C. 3895
Danielson, A. 6414
Dañobeitia, J.J. 6415
Daragan-Sushchova, L.A. 4794
Das, Shamita 5944
Das,V.K. 5695
D'Asaro, C.N. 4275
D'Asaro, Eric 3320
da Silva, N.L. 5479
Date, Etsuji 6288
Dauvin, J.-C. 5541, 6014
Davidson, Garry 4369
Davidson, K.L. 3960
Davies, A.M. 3271, 3272, 3293, 5692
Davies, G.F. 5945
Davies, J.H. 4744
Davies, R.E. 5012
Davies, T.A. 4738
Davis, A.A. 4905
Davis, A.S. 5394
Davis, D.M. 3653
Davis, E.E. 5873
Davis, G.B. 3976
Davis, O.K. 3577
Davis, R.A. Jr. 6325
Davis, R.E. 5636
Davis, Wayne 3538
Davison, B. 3986
Davy, Philippe 6408
Davydov, A.V. 4501
Dawes, C.J. 5562
Dawson, W.R. 4903
Day, J.W. Jr. 4021
Day, R.W. 5837
De, T.K. 6453
Deacon, Margaret 4356
De Baar, H.J.W. 3479
DeBari, Susan 5415
de Billy, G. 4037
De Carlo, E.H. 4807, 4809
DeFranco, S.J. 3326
Degani, Amotz 4075
Degobbis, D. 5174
de Groot, S.J. 3836
Dehairs, F. 4023, 5812
Deibel, Don 4200, 5482
de Jong, K. 6437
de Jonge, V.N. 3872
de Kok, J.M. 5811
Dekov, V.M. 4094
de la Lanza Espino, G. 3496
d'Elbée, Jean 5467
Delcroix, Thierry 5023
Deleersnijder, Eric 6178
Delgado, M. 5979
Delgado-González, O. 3308
Del Genio, A.D. 5741
Delille, D. 3754
Dell'Osso, L. 4606
Delmas, R.J. 5769, 6130
Delo, E.A. 3530
de Madariaga, Iosu 6457
DeMaria, Mark 3449, 4614
DeMaster, D.J. 4084, 5324
Demetrius, Lloyd 5587
De Mey, Pierre 6162
Demidova, T.A. 4407
Demin, Yu.L. 6179
Demina, L.L. 5314
de Mora, S.J. 5579
de Moustier, C. 4490
Dempsey, J.P. 3326, 3327
Denlinger, R.P. 5848, 5946
Denman, K.L. 5466
Denny, M.W. 4327
DePaolo, D.J. 5796
De Pauw, Niels 4326
Dera, Jerzy 5736
De Ranier, S. 4942
Derber, J.C. 3460
de Rijk, S. 3562
de Rondo, J.G. 4442
Derr, Mark 6124
Déruelle, B. 5395
De Ruijter, W.P.M. 6181
Desa, J.A.E. 5444
Desbois, M. 4592
Descolas-Gros, C. 4037
Desegaulx, Pascal 5916
Deslous-Paoli, J.-M. 5539
De Stefano, Piero 3615
De Szoeke, R.A. 4571
Detrick, R.S. 3647
Deutsch, Alex 3656
Devassy, V.P. 5980
de Verdiere, A.C. 5107
de Vernal, A. 5847
de Vernal, Anne 3422
Devi, J.S. 5986
Devirts, A.L. 3648
De Vito, M.C. 4348, 4349
De Vitre, Richard 4000
de Voogd, B. 6416
DeVries, J.W. 5268
Dewar, W.K. 3399, 5679, 5733
de Wit, M.J. 6393
Dexter, D.M. 4884
Dia, A.N. 5321
Dia, Aline 5282
Diakite, Amady 3433
Diament, M. 4759
Diaz, Gilberto 6074
Diaz-Castañeda, Victoria 3681
Dick, H.J.B. 5931, 6400
Dick, J.E. 3391, 5271
Dickey, T.D. 5496
Dickins, H.D. 5524
Didden, Norbert 4391
Didymus, J.M. 3797
Dieckmann, G.S. 3497, 5085
Diel, Sabine 6495, 6496
Dierck, I. 5167
Dietrich, P.G. 4175
Dietrich, W.E. 4066
Dill, L.M. 4243
Dillinger, W.H. 5947
Dillon, W.P. 4886, 5374, 5416
DiMarco, R.L. 5086, 5108
Dineen, J.F. Jr. 6040
Dinesh Kumar, P.K. 5693
Dingemans, M.W. 6207
Dionne, J.-C. 5272
Diraison, Christophe 3641
Di Toro, D.M. 3801
D'Itri, F.M. 3822
Dix, G.R. 4665
Dizerbo, A.H. 4311
Djogić, Renata 4001
Dmitriev, N.E. 4477
Dobb, Edwin 3840
Dodd, N. 3916
Doering, J.C. 5599
Doino, J. 3747
Dojiri, M. 4297
Dojiri, Masahiro 4281
Dolan, J.R. 3699
Dolan, Robert 5255
Dolgikh, G.I. 4501
Dolin, L.S. 4483
Dollar, S.J. 4629
Dombrowsky, Eric 6162
Dommermuth, F.M. 4502
Donaghay, P.L. 3950
Donaldson, R.J. Jr. 3450
Donat, J.R. 5458
Donelan, M.A. 5074, 5599
Doney, S.C. 5161
Donguy, J.R. 6180
Doornbos, D.J. 3525
Doré, A.G. 3578
Dorofeyev, V.L. 3400
Doronina, T.N. 4542
Dorsey, R.J. 5375
Dosso, H.W. 4713
Douglass, S.L. 6098
Dowd, P.A. 5238
Dowdeswell, J.A. 4478
Dowidar, N.M. 3498, 3499
Downing, J.A. 6058
Dozorov, T.A. 4813
Drake, D.E. 3917
Drange, Helge 6099, 6515
Dreibus, G. 5395
Drijfhout, S.S. 4528
Drijkoningen, Guy 3811
Driscoll, D.M. 4555
Driscoll, N.W. 6365
Drits, A.V. 6454
Dronov, G.M. 4491
Druet, Czeslaw 5652
Druffel, E.R.M. 3490, 6299
Drummond, M.M. 3770
Du, Deli 5438
Duarte, C.M. 3700, 5000
Dubuisson, Gilles 4126
Duce, R.A. 5218, 5808
Duce, Robert 5498
Dugan, J.E. 6477
Dugan, J.P. 5086, 5108
Dugdale, R.C. 3701, 3733, 5200
Duineveld, G.C.A. 4885
Duinker, J.C. 4050
Dulac, François 3987
Dulski, P. 6414
Dumon, J.C. 6063
Dunayev, N.N. 6320
Dunlop, J.I. 3373
Dunning, G.R. 3588
Dupré, Bernard 5282
Durant, S.M. 6517
Durante, K.M. 3739
Durga Prasad Rao, N.V.N. 5856
Duursma, E.K. 4315
Duvel, J.P. 3413, 3414
Duvel, J.Ph. 3951
Duvel, J.-Ph. 4592
Dworski, J.G. 3263, 5099
Dyer, K.R. 3536, 6163
Dyke, P.P.G. 3272
Dymnikov, V.P. 4572
Dyrynda, E.A. 5570
Dysthe, K.B. 4503
Dzyuba, V.P. 4504

Earle, S.A. 4339
Earll, R.C. 5615
Ebinger, C.J. 3655
Ebuchi, Naoto 3309, 3901
Echelman, T. 3702
Eckardt, Matthias 3328
Eckert, S.A. 6141
Edgar, G.J. 3740, 6455, 6469
Edgar, N.T. 5416
Edmunds, P.J. 4247
Edwards, C.A. 4662
Edwards, R.N. 4726
Efroimson, V.O. 6167
Egan, W.G. 3453
Eggins, S.M. 4135, 5925, 5926
Eglinton, Geoffrey 4690
Eglinton, T.I. 5175
Egloff, F. 4146
Ehrhardt, M.G. 4623
Eicken, H. 3347, 6094
Eicken, Hajo 3329, 5971
Eidsvik, K.J. 6226
Eiríksson, Jón 3579
Eisenhauer, A. 5966
Eisma, D. 3501, 5207, 5208, 5273
Eittreim, S.L. 4129
Ekker, Morten 4946
Elbrächter, Malte 4833
Elderfield, Henry 3483, 4643, 4681
Eldholm, Olav 4745
El-Dik, M.S. 4045
Eldin, Gérard 6156
Eldredge, L.G. 4819
Elferink, A.O. 5617
Elgar, Steve 4693, 6233
El-Hawary, Ferial 3374
El-Jabi, N. 5694
Elliott, J.E. 4316
Elliott, M. 3823
Ellis, D.D. 5096
El Sabrouti, M.A. 3499
El Sammak, A.A. 3499, 3506
Elsberry, R.L. 4613, 5162
Elskens, M. 3755
Elthon, Don 6417
Emanuel, K.A. 3446, 3952
Emara, H.I. 3500
Embley, R.W. 6379
Emerson, C.W. 4072, 4248
Emery, K.O. 4741
Emery, W.J. 5019, 5669
Enfield, D.B. 3953
Engebretson, D.C. 3665
Enomoto, Hiroyuki 4479
Enting, I.G. 5219
Eppler, D.T. 5714
Eppley, R.W. 3502, 3703
Eremeev, V.N. 6164, 6165
Erickson, C.L. 4104

Erlenkeuser, Helmut 5348
Erlingsson, Björn 3330
Ermakov, S.A. 3429
Esaias, W.E. 5473
Escofet, Anamaria 3683
Escritor, Florence 6497
Escutia, C. 6418
Eshet, Y. 5322
Estabrook, C.H. 4767, 5911
Estela, J.M. 3488
Estep, L. 3912
Estrada, M. 5979
Estrada, Marta 5981
Estrada Maldonado, C.F. 6280
Etkin, V.S. 4465
Etling, D. 5093
Evans, G.T. 5468
Evans, J.C. 3862
Evans, R.B. 4500
Evans, R.D. 3804
Evans-Morgis, Jeannette 5043
Evens, R. 4673
Everson, I. 4979
Ewing, John 5283
Ezer, Tal 5653

Faas, R.W. 3547
Fábregas, Jaime 4269
Fadlallah, Y.H. 4965
Fagade, S.O. 4299
Faganeli, Jadran 3504
Fahrbach, Eberhard 3884
Faïn, J. 4053
Fairall, C.W. 6256
Fairbanks, R.G. 3418, 6366
Fairweather, P.G. 3741
Falavigna da Rocha, C.E. 4286
Falkowska, Lucyna 5742, 6032
Falkowski, P.G. 5566, 5756
Falkowski, Paul 4312
Fallon, F.W. 5947
Falloon, T.J. 4135
Fancey, L.L. 4948
Fanning, K.A. 5201
Farge, Marie 3927
Farinella, Paolo 6142
Farmer, D.M. 4525
Farrell, B.F. 5067
Farrington, J.W. 6530
Fattorusso, Ernesto 6072
Fauchald, Kristian 4911
Faugeres, J.-C. 5290
Favre, Philippe 3580
Fawcett, P.J. 3581
Feddema, J.J. 3425
Fedorchuk, A.V. 3642
Fedorov, K.N. 3925
Feely, R.A. 4682
Fegley, S.R. 5209
Felder, D.L. 3783
Feller, R.J. 5514
Feng, J.Q. 5722
Feng, Shizuo 5079
Fennemore, G.C. 5104
Fenster, M.S. 5255
Fenton, G.E. 3778
Ferentinos, George 5835
Ferguson, B.G. 4505
Fernandes, A.A. 5695
Fernandez, D.M. 5068
Fernández, E. 6450
Fernández, Emilio 6456, 6457
Fernàndez, M. 6375
Fernández, Manel 6426
Fernández, Pilar 5571
Fernández de Puelles, Luz 3710
Feron, R.C.V. 6181
Ferrandez-Cañadell, Carles 5350
Ferrari, L. 5924
Ferraro, Salvatore 3428
Ferrière, Jacky 5372
Festa, J.F. 5637
Fett, R.W. 5743
Feuillard, Michel 6419
Fey, C.L. 5474
Ffield, Amy 4529
Fiedler, P.C. 4997, 5469
Field, M.E. 5867
Fiers, F. 4282
Figueroa R., J.M. 5744
Filcek, Krzysztof 4290
Filippov, I.A. 3849
Filloux, J.H. 6175
Fine, R.A. 4533
Finlayson-Pitts, B.J. 5770
Firing, E. 6152
Fiscella, B. 3443
Fischer, A.G. 6339
Fischer, Gerhard 4024, 4239
Fishelson, L. 3702
Fisher, D.M. 5376
Fisher, T.R. 6458
Fitas, A.J.S. 4760
Fitch, Mark 4607
Fitzgerald, W.F. 5784
Fitzwater, S.E. 5193, 5205
Flato, G.M. 3331, 3340, 5715
Fleagle, R.G. 4988
Flegal, A.R. 4046
Fletcher, C.H. III 5256
Fletcher, Hugh 4370
Flocchini, Giuseppe 3415
Flock, M.E. 5546
Flood, P.R. 4200
Floury, Luc 5239
Flower, M.F.J. 6399
Focardi, Silvano 6505
Fogarty, M.J. 4980
Fogel, M.L. 4082
Fogelqvist, Elisabet 4036, 4641
Fomin, L.M. 3873
Fonda Umani, Serena 6451
Font, Jordi 3292
Fontolan, Giorgio 6295, 6337
Fontugne, M. 4037
Foote, K.G. 5097
Forbes, D.L. 5844
Forbes, J.R. 5470
Foreman, M.G.G. 5057
Foreman, S.J. 5786
Forman, S.L. 5286
Forristall, G.Z. 3874
Forslund, Trond 4761
Forster, Stefan 6300
Förstner, U. 4047
Förstner, Ulrich 3825
Forsyth, D.W. 4774
Foster, B.A. 5982
Foster, M.S. 6097
Foucher, J.P. 6376
Fourqurean, J.W. 6024
Fowler, A.C. 5087
Fowler, C. 5669
Fowler, G.A. 3353
Fowler, S.L. 3831
Fox, Colin 3332, 3361
Fox, D.N. 5680
Fox, M.F. 4424
Fox, P.J. 4994, 5950
Fradkov, A.S. 4792
Fraedrich, Klaus 3943, 3966
Fraga, F. 5053
Fraga, Fernando 3282, 3704, 6172
France, R.E. 4108
Franchito, S.H. 3967
Francis, T.J.G. 4970
François, L.M. 4691
Franke, M. 4159
Franklin, Fred 6145
Franklin, J.L. 4614
Franklin, J.M. 6351
Franks, P.J.S. 4201, 4202, 6459
Fransz, H.G. 4820, 4834
Franzsen, A.J. 5837
Frederick, Daniel 5353
Frederick, James 3442
Frederick, Peter 6289
Frederiksen, Rune 6473
Frederking, R.M.W. 3357
Freedman, D.H. 3844
Freeman, R. 6385
Freeman-Lynde, R.P. 5323
Freestone, David 4983
Frei, M. 5591
French, J.R. 3918
Frenzel, Gerhard 5396, 5406
Frew, N.M. 5181, 5182
Fridman, A.M. 3928
Friedrichs, C.T. 5058
Frisk, G.V. 3557
Frisoni, G.-F. 3711
Fritsch, J.M. 3438
Frohlich, Cliff 5417
Fröhlich, J. 6231
Frost, B.W. 5471
Frost, C.D. 5400, 5401
Frostick, L.E. 4692
Frouin, Robert 4553
Fry, Brian 3509
Fry, J.C. 6112
Fryer, Patricia 4064, 5377
Fryer, R.J. 5611
Frysinger, G.S. 5109
Fu, L.-L. 3276
Fu, R.-S. 5418
Fu, Zilang 5671
Fuhrman, J.A. 4211, 4853, 4905, 5220
Fujimoto, Hiromi 5905
Fukamachi, Yasushi 5042
Fukao, Yoshio 5419
Fukasawa, Masao 3286
Fukuda, Yoichi 4119, 6221
Fukumori, Ichiro 4530
Fukushima, Kazuo 3548
Full, W.E. 5714
Fuller, Mike 5001
Fulton, D.B. 6286
Funaki, Minoru 5391
Furduev, A.V. 4491
Furnes, G.K. 4573
Furness, R.W. 5580
Furtado, V.V. 5860
Furuta, Toshio 4121
Fusté, Xavier 3707
Fyfe, J. 5041

Gable, C.W. 6394
Gable, Robert 5239, 5240, 5369
Gabriel, Wilfried 4213
Gadd, G.M. 6112
Gadhoumi, M.H. 5183
Gaffin, S.R. 5420
Gaffney, D. 3419, 5129
Gagnon, R.E. 3333
Gagoshidze, Sh.N. 4445
Gairola, R.M. 5237, 5241
Galgani, F. 4947
Galimov, E.M. 4038
Galindo Reyes, J.G. 3756
Galkin, D.V. 4446
Galkin, S.V. 6470
Gallagher, Kerry 3811
Gallas, Jutta 3328
Gallée, Hubert 5752
Gallegos, C.L. 3699
Galloway, J.L. 6316
Galloway, J.N. 5808
Galloway, W.E. 4803
Galuzinskaya, A.Kh. 3743
Gamache, J.F. 5765
Gamberoni, Lucien 3880
Gammill, S.P. 6326
Gamo, Toshitaka 3566
Gan, Jianping 6227
Gangaiah, T. 3470
Ganske, J.A. 5770
Ganssen, G.M. 3616
Gao, Y. 4611, 6268
Gárate Lizárraga, I. 3705
Garbary, D.J. 4931
Garççon, V.C. 6284
García, Emili 3292
García León, M. 5184
Gardashov, R.G. 3366
Gardner, T.W. 4147
Gardner, W.D. 4634
Gardulski, A.F. 3582
Gargett, A.E. 5202
Garnier, J.-M. 4025
Garrison, D.L. 4930, 6460
Garside, Chris 4835, 4856
Gartner, S. 5351
Garvine, R.W. 4414, 4437
Gaskin, D.E. 4637
Gasparini, G.P. 6159
Gaulier, J.-M. 3626
Gautier, Catherine 4553
Gavrilenko, Ye.Ye. 4933
Gavshin, V.M. 4672
Gawarkiewicz, Glen 4425
Gaxiola Castro, Gilberto 3695
Gaxiola-Castro, Gilberto 3706
Gearing, J.N. 3517
Geider, R.J. 5566
Geirsdóttir, Áslaug 3579
Geist, E.L. 5421
Gelabert, B. 6321
Gelfenbaum, G.R. 6196
Gemmrich, J. 5723
Genin, Amatzia 4886
Genrich, J.F. 4762
Georg, Rüdiger 4330
George, Dev 5965
German, C.R. 3483
Germani, M.S. 5891
Germano, M. 5729
Gerringa, L.J.A. 4002
Gersonde, Rainer 4022
Gertner, Yaron 5605
GESAMP 6113
Geyer, W.R. 6194
Ghil, Michael 3812, 5745
Ghobashy, A.-F. 4888
Ghosh, S.K. 5800, 5821
Gianesella-Galvão, S.F. 4221
Gibbs, C.F. 4953
Gibson, D.T. 4906, 4907
Gienapp, Hans 5049
Gieskes, J.M. 5307
Gieskes, W.W.C. 5976
Gilbert, Denis 3430
Gilbert, F. 4947
Gili, J.M. 3707
Gillard, D. 5948
Gilmer, R.W. 3766
Gindler, I.V. 4506
Gingerich, Owen 4364
Ginsburg, G.D. 4170
Ginsburg, R.N. 4085, 5257
Girardin, Nicole 6419
Girdler, R.W. 4148
Girgis, M.H. 5326
Girling, A.E. 6073
Gittleman, J.L. 4963
Glad, I.K. 5069
Gladyshev, S.V. 3919
Glatzmaier, G.A. 3926, 4714
Glazman, R.E. 3310

Glegg, S.A.L. 4495
Glibert, P.M. 3694, 4835, 6301
Glimm, James 3813
Glover, D.M. 5161
Glowienka-Hense, Rita 4593
Glowinski, Roland 3929
Gluyas, Jon 4666
Gnevyshev, V.G. 5116
Gobbi, D. 5060
Gochfeld, Michael 6070
Godeaux, Jean 3687, 3767
Godfrey, J.S. 6166
Godin, Gabriel 4436, 5059
Goes, J.I. 5980
Goeyens, L. 4023
Goeyens, Leo 4017
Goff, J.A. 6420
Goldberg, David 5949
Goldberg, M. 4149
Goldberg, W.M. 5540
Goldschmidt, P.M. 4077
Goldstein, S.J. 5927
Golenko, N.N. 3885, 4467
Golik, Abraham 5605
Golmen, L.G. 4335
Golubev, Yu.N. 6228
Golubitskiy, B.M. 4485
Gómez, E. 3488
Goncharenko, B.I. 3915, 4507
Goncharov, V.K. 3920
Gong, W.K. 6163
Gontier, Gilles 6506
Gonzalez, Cesar 6074
Gonzalez, F.I. 4417
Gonzalez, H. 6045
González, H.E. 5813
González, Humberto 3518
Gonzalez, J.-L. 6307
Gonzalez-Rodriguez, Eliane 4836
Good, G.A. 3619
Good, R.E. 4086, 6330
Gooday, A.J. 5557
Goodfellow, W.D. 6351
Goodfriend, G.A. 5832
Gooding, N.R.L. 6106
Gorbarenko, S.A. 5329
Gorbunova, Z.N. 4095
Gordiyenko, A.P. 4828
Gordiyenko, V.A. 4507
Gordon, A.H. 3944
Gordon, A.L. 4529, 4533, 5130, 5681
Gordon, H.R. 5094
Gordon, L. 4995
Gordon, L.I. 4029
Gordon, R.G. 3630, 5386
Gordon, R.M. 5205
Gore, D.J. 4829, 6046, 6049
Gorny, M. 6049
Gorsky, Y.N. 3554
Gorsline, D.S. 6343
Görür, Naci 3583
Gottlieb, J. 5777
Goulding, Allan 3273
Gourdeau, Lionel 5021
Gouriou, Yves 4392
Gowing, M.M. 4837, 4859, 6460
Goy, J.W. 4920
Goyet, Catherine 3489, 6285
Graber, E.R. 4797
Gracia, M.P. 6054
Gradstein, F.M. 4736
Graf, H.-F. 4556
Grainger, E.H. 3779
Gramberg, I.S. 4120
Grammer, G.M. 5257
Granéli, Edna 6003
Grant, Jonathan 4248
Grant, W.D. 3917
Grantz, Arthur 5331
GRAPE Team, i 4731
Grassl, Hartmut 4557
Grassle, J.F. 4887
Gray, A.J. 6057
Gray, D.A. 4505
Gray, S.H. 4653
Gray, W.M. 3461, 4586
Grazzini, C.V. 5896
Greatbatch, R.J. 3273, 5666
Great Britain 5799
Grebmeier, J.M. 5450
Green, Alison 4876
Green, D.H. 4135
Green, M.O. 5833
Green, S.C.H. 3558
Green, Theodore 4447
Greene, R.M. 5566
Gregg, W.W. 5472
Gregory, M.R. 5606
Grémare, Antoine 6468
Grenfell, T.C. 4480
Gresho, P.M. 3930
Greysukh, V.M. 3367, 4483, 4485
Grichuk, D.V. 4684
Grieve, R.A. 3656
Griffith, J.D. 4104
Griffiths, W.B. 3712
Grigg, R.W. 3584
Griggs, D.J. 3976
Grijalva Chon, J.M. 5804
Grimaud, Daniel 3567
Grimes, D.J. 4270
Grimshaw, R. 3860
Grimshaw, R.H.J. 5083
Grindlay, N.R. 5950
Grose, William 6262
Gross, T.F. 4660
Grossman, D. 3747
Groten, Erwin 5906
Grove, T.L. 5929, 5930
Grün, Rainer 4054
Gründlingh, M.L. 3274
Grünig, Sigrun 6340
Grunow, A.M. 6392
Grützner, J. 4159
Gryanik, V.M. 4542
Grygier, M.J. 3780
Guan, D.M. 3994
Guard, C.P. 6273
Guazzelli, Elisabeth 5076
Gudmundsson, Agust 4746, 4761
Gudmundsson, G.A. 6482
Guennoc, P. 4131
Guillaume, Anne 6148
Guimera, Joan 6433
Guiss, Claudia 5517
Guliy, V.N. 4808
Gulliksen, B. 3716, 3717
Gundlach, Heinrich 5294
Gunkel, Wilfried 6079
Guo, Binghur 5682
Guo, Binghuo 5686
Gupta, A.D. 4728
Gurina, N.P. 6480
Gurnis, Michael 4763
Guza, R.T. 3312, 5700

Haake, Birgit 3954, 4016
Haberman, Richard 3311
Habib, Daniel 4115
Hacisalihoğlu, Gülen 3454
Hacker, J.M. 4581
Hackman, R.H. 4508
Haddad, P.R. 3467
Haefliger, M. 5088
Haflidason, Haflidi 3585, 3605
Hagelberg, Teresa 4693
Hagen, R.A. 5377
Hager, B.H. 3659
Hager, S.W. 5805
Haggerty, J.A. 4683
Hagiwara, Takeshi 3980
Hagström, Å. 4240
Haidvogel, D.B. 5106
Hain, Stefan 6012
Hajnal, Z. 4764
Hakkinen, S. 5024
Halim, Y. 3688
Halka, Jeffrey 3549
Hall, J.M. 4765
Hall, N.T. 4784
Halliday, A.N. 5872
Halliwell, G.R. Jr. 3275
Hallsworth, C.R. 5284
Hama, J. 4838
Hama, Takeo 4839
Hamermesh, D.S. 5620
Hamilton, D.P. 3832
Hamilton, Miriam 3375
Hamilton, Peter 3875
Hammitt, J.K. 6143
Hammond, S.R. 4680, 5378
Hamza, F.H. 4076
Hanawa, Kimio 4587
Handa, N. 4838, 4840, 4843
Handel, M.D. 6241
Hanks, T.C. 6421
Hannah, C.G. 3863
Hannington, Mark 3671
Hansen, Benni 4203
Hansen, F.C. 4204
Hansen, L.S. 4249
Hansen, P.J. 4203
Hansen, Ulrich 5117
Hansom, J.D. 4633
Hanson, G.N. 4096
Harada, Eiji 4969
Haralabus, G. 4490
Haraldsson, Conny 5185
Harbison, G.R. 3766
Harbitz, C.B. 5699
Harcourt, Robert 4877
Harden, S.L. 5324
Harding, B.W. 4970
Harding, L.W. Jr. 5473
Hargrave, B.T. 3781, 3802
Hargreaves, N.D. 4055
Haridas, P. 5548
Harkantra, S.N. 6015
Harker, S.D. 3558
Harland, Rex 4705
Harm, U. 5999
Harmelin, J.-G. 5558
Harper, D.J. 5827
Harrell, J.A. 5621
Harris,J.M. 5163
Harris, P.T. 3539, 4647, 5258
Harris, R.A. 3632
Harris, R.P. 6449
Harrison, E.F. 3416
Harrison, N.M. 5450
Harrison, P.J. 5466
Harrison, R.M. 5778
Harrison, S.P. 5885
Harrison, T.M. 4737
Harrison, W.G. 5488
Harry, D.L. 4734, 4747, 5379
Hart, S.R. 5422
Hartnoll, R.G. 4888
Harvey, G.R. 6522
Harvey, H.R. 5221
Harvey, L.D.D. 6242
Harwood, John 6517
Hasegawa, Katsuo 4273
Hashima, Masahiro 5654
Hasse, L. 5723
Hatanaka, Akemi 4121
Hatanaka, Katsuya 6102
Hatcher, B.G. 4362
Hattori, Hiroshi 4841
Haugan, P.M. 6099, 6515
Hauger, Eirik 5325, 5360
Haury, L.R. 5474
Hawke, D.J. 4018
Hawkins, J.D. 3867
Hawkins, James 6384
Hawser, S.P. 6065
Hay, B.J. 3491
Hay, R.B. 4898
Hay, S.J. 3708
Hay, W.W. 4735, 6153
Hay. B.J. 3586
Hayashi, Y.-Y. 4460
Hayes, D.E. 6512
Hays, G.C. 4878
Head, E.J.H. 5814
Head, P.C. 4043
Heap, J.M. 3823
Heath, M. 3734, 3735
Hebert, D. 3392
Hebert, P.D.N. 4328
Heckman, Joanne 3830
Hedges, J.I. 5190, 5192, 5803
Hedges, T.S. 4408
Hedrick, D.B. 6484
Hegde, A.V. 4448
Hegeman, W.J.M. 6281
Hegg, D.A. 6269
Hein, G.W. 5907
Heip, C. 4324, 5507, 5508, 6471
Hekinian, R. 5423
Helbling, E.W. 5475, 5476
Helder, Willem 5214
Helleur, Robert 5482
Hellman, Birthe 4893
Hellou, J. 4948
Helz, G.R. 5857
Hemming, N.G. 4096
Hempel, Gotthilf 3905
Henderson, E.W. 4182
Henderson-Sellers, A. 5757
Henke, C.H. 5428
Henn, D.S. 4549
Henriet, J.P. 4731, 5838
Henriksen, E. 3601
Henriques, P.J. 5337
Henry, T.W. 4663
Hense, Andreas 4593
Herbers, T.H.C. 3312, 5700
Herbert, R.A. 6112
Herbert, R.S. 5342
Herbert, T.D. 5285
Herdendorf, C.E. 5260
Herguera, J.C. 5886
Herlihy, L.J. 4040
Herman, A.W. 5477, 5996
Hernández-Hernández, Félix 4317
Herrero-Bervera, Emilio 4715
Herring, T.A. 4716
Herzfeld, U.C. 3709
Hess, A.E. 5242, 5310
Hesse, Reinhard 5249
Heta, Yurie 3981
Heumann, K.G. 6120
Hewitt, C.N. 3986
Hey, Richard 3584
Hibler, W.D. III 3331, 3335, 3336, 3340, 3355, 3356, 3365, 3909, 5715
Hickey, C.W. 6075
Hickey-Vargas, Rosemary 3643
Higashiyama, T. 4949
Highsmith, R.C. 4283
Hilbertz, W.H. 6144
Hilbish, T.J. 4178
Hilgen, F.J. 3587
Hill, A.E. 4842
Hill, P.S. 4205
Hill, R.I. 5387
Hillmer, Gero 4363

Hilton, D.R. 4748
Hines, A.H. 6040
Hinz, K. 4150
Hirai, Mitsuyuki 4421
Hiraki, Keizo 3993
Hirano, Reijiro 6523
Hirata, Naoshi 6412
Hird, S.J. 4673
Hirn, Alfred 4811
Hiroshi, Ishizaki 5677
Hite, G.E. 5607
Hiyagon, H. 4749
Hiyoshi, Yoshihisa 6438
Hobbs, C.H. III 5259
Hobbs, P.V. 5783
Hobbs, R.C. 4921
Hobbs, S.L. 4509
Hoblitt, R.P. 4753
Hodgkins, Richard 4478
Hodych, J.P. 3588
Hoeber, Heinrich 3334
Hoffman, A.J. 4936
Hoffmann, V. 5357
Höfle, M.G. 3763
Hofstraat, J.W. 5983
Hogan, A.W. 3453
Hogg, N.G. 3898
Holbrook, W.S. 4766
Holland, H.D. 4035
Holland, W.R. 3276
Holliday, B.P. 3483
Holligan, P.M. 6327
Holloway, Greg 3320, 3861, 4470, 5026
Holloway, J. 3912
Holm, E. 4314
Holme, S.J. 5255
Holmer, Marianne 5586
Holmes, L.J. 4829
Holm-Hansen, Osmund 4227, 5476
Holt, T.R. 4574
Holt, W.E. 4097
Holvorcem, P.R. 5665, 5746
Holzer, Gunther 5198
Hong, G.H. 5203
Honjo, Susumu 4634, 6293
Honma, Hiroji 6422
Hood, L.L. 3848
Hopkins, M.A. 3335, 3336
Hopkins, T.L. 4930, 5546
Hoppema, J.M.J. 5186
Horel, J.D. 3974
Horiuti, Kiyosi 5724
Hornby, B.E. 3526
Horrigan, S.G. 3720
Horton, C. 5655
Horton, C.W. 5670
Hoshiai, Takao 4228
Hosier, P.E. 6326
Hostettler, F.D. 4649, 4954
Hough, A.R. 4922
Houston, Heidi 3668
Houvenaghel, G.T. 4354
Houze, R.A. Jr. 5763, 5765
Hovan, S.A. 3589
Hovind, Havard 5210
Howarth, M.J. 5696
Howarth, R.W. 6060
Howarth, T.R. 4510
Howell, M.W. 5274
Howes, B.L. 6123
Howland, R.J. 3479
Hršak, D. 5533
Hsieh, W.W. 5026
Hsu, S.A. 3957
Hsu, Y.-H.L. 3902
Hu, Dunxin 5728
Hu, Jianyu 5671
Hu, Zhongheng 6367
Huang, C.-S. 6279
Huang, C.-Y. 5138
Huang, Daji 5050
Huang, Fengting 5718
Huang, J.-H. 5418
Huang, Liangmin 5478
Huang, Liren 6328
Huang, N.E. 5701
Huang, Peiji 5072
Huang, R.X. 3864, 4393
Huang, R.-X. 6244
Hubbard, D.M. 6477
Hubbert, G.D. 6257
Huchon, Philippe 3626, 6381
Hudnut, K.W. 4371
Hudson, R.J.M. 5485
Huggett, C.L. 4890
Huggett, Q.J. 6313
Huggett, R.J. 6076
Hughes, D.J. 5534
Hughes, G.W. 5326, 5327
Hughes, P. 3303
Hughes, S.A. 6100
Hughes, T. 5737
Hughes, T.M.C. 6166
Hühnerfuss, Heinrich 6079
Hui, W.H. 5074
Hume, T.M. 5260
Humes, A.G. 4284
Hunt, G.L. Jr. 4899
Hunte, W. 4258
Hunter, K.A. 4018
Huntington, H.P. 6125
Huntley, D.A. 3536
Huntley, M.E. 6497
Huntsman, S.A. 3991, 6001
Hup, M. 5504
Hurlburt, H.E. 5638
Hurlbut, C.J. 5509
Hurtig, E. 4151
Hurukawa, Nobuo 6380
Hussey, B.H. 6025
Hutchins, D.A. 5458
Huthnance, J.M. 3267, 5039
Hutter, Kolumban 3337, 3338
Huys, R. 5510
Hyland, Jeffrey 4250
Hyndman, R.D. 5858, 5873

IABO 4981
ICES 5229, 5608
Ichii, Taro 3736
Ichiye, Takashi 6085
Idso, S.B. 3952, 3985
Ignatiades, L. 6114
Iidaka, Takashi 4152, 5424
Ikeda, Motoyoshi 3339
Ikeda, S. 4056
Ikeda, Tsutomu 4285
Ikegami, Miwako 6270
Ikeya, M. 4056
Il'ichev, V.I. 4009, 4504, 4507
Iliffe, T.M. 4295
Il'in, Yu.A. 4582
Imai, N. 4057
Imberger, Jörg 3402, 6205
Imoto, Masajiro 6380
Ingram, B.L. 3590
Ingram, R.G. 6227
Ingram, W.J. 4560
Inman, D.L. 6200
Inoue, H.Y. 5164, 6263
Inoue, Masamichi 4569
Ip, C.F. 3340
Irish, J.D. 5649
Isayev, G.V. 4394
Ishida, Mizuho 3633
Ishikawa, Masao 4404
Ishikawa, Tsuyoshi 5425
Isley, A.E. 4660
Ismail, N.S. 4950
Ita, Joel 5951
Ito, Hiroshi 4620
Itsweire, E.C. 5473
Ittekkot, Venugopalan 3954
Ivančić, I. 5174
Ivanov, G.I. 4090
Ivanov, K.G. 4717
Ivanov, L.M. 6165
Ivanov, S.S. 4153
Ivanov, V.I. 4380
Ivanov, Yu.A. 4426
Ivanova, Ye.V. 6355
Iverson, R.M. 5848
Iwasaki, Tetsuya 4659
Iwata, Shizuo 6214
Iyer, S.D. 5928
Izawa, Hirofumi 6288

Jacka, T.H. 3341
Jackson, A.E. 6067
Jackson, D.R 3263
Jackson, G.A. 5984
Jackson, N.L. 4073
Jacobs, D.C. 3852
Jacobs, J.A. 5002
Jacobs, S.S. 3886
Jacobs, Stan 3906
Jacobsen, S.B. 5795
Jacobsen, T.R. 5209
Jacobson, M.J. 4517
Jacobson, R.S. 5952
Jacques, G. 4206
Jacques, Gayet 5246
Jaeckle, W.B. 5972
Jama, J. 4843
Jambon, A. 5395
James, N.P. 4091
James, T.S. 6371
Jamous, Daniel 3865
Jankowski, Andrzej 5652
Jannasch, H.W. 3757
Janowiak, J.E. 4604
Jansá, Javier 3710
Jansa, L.F. 3634, 3678
Jansen, J.H.F. 3591
Janssen, P.A.E.M. 3313, 4466
Japan 4062
Jaramillo, E. 6472
Jarry, Vincent 3711
Jarvis, G.T. 3657
Jarvis, Ian 3527, 3528
Jarvis, K.E. 3527, 3528
Jaumé, S.C. 4767
Javoy, M. 4136
Jaworski, N.A. 5806
Je, J.-G. 6507
Jean-Baptiste, P. 3887
Jefferys, W.H. 4964
Jeffries, M.O. 3342, 3343, 5716
Jenkins, C.J. 4667
Jenkins, W.J. 5161
Jenner, G.A. 3658
Jennings, A.E. 3791, 5286
Jensen, Andreas 6473
Jensen, L.M. 4866
Jespersen, A.-M. 5985
Jessup, A. 4079
Jestin, Florence 6381
Ji, Zhiqiang 5793
Jiang, S.C. 5525
Jiménez, Carlos 6066
Jin, K.-R 3866
Johansson, Birgitta 4893
Johnsen, H. 6201
Johnson, B.D. 6294, 6485
Johnson, Craig 6491
Johnson, D.R. 3867
Johnson, Douglas 3432
Johnson, G.E. 3712
Johnson, G.H. 4099
Johnson, G.L. 6105
Johnson, K.M. 6400
Johnson, K.S. 3469, 4618
Johnson, K.T. 5397
Johnson, Rex 5250
Johnston, A.M. 5492
Joiris, C.R. 3685
Jones, C.H. 5426
Jones, C.W. 6112
Jones, D.E. 3344, 3358
Jones, J.E. 3271, 5692
Jones, M.R.L. 5579
Jones, S.J. 3345
Jönsson, Benno 4179
Jonsson, I.G. 5077
Jonsson, P. R. 4181
Jørgensen, B.B. 3510, 4180
Jørgensen, L.A. 3494
Jørgensen, N.O. 5275
Jorissen, F.J. 5897, 5968
Josanto, V. 5693
Joseph, Devorah 5427
Joseph, M.G. 5725
Joseph, M.X. 5725
Joshi, P.V. 6236
Jouffre, Didier 3713
Joyce, T.M. 4409, 4427, 4968, 5180
Jumars, P.A. 5855
Jung, H.-S. 5287
Juračić, Mladen 4032
Jury, M.R. 3431, 3939, 3975

Kaartvedt, Stein 4844
Kaas, Hanne 4845
Kadam, A.N. 5830
Kadlec, J.A. 3750
Kagami, Hideo 4659
Kagan, B.A. 3868, 4694
Kaiho, Kunio 5352
Kaila, K.L. 4773
Kakihara, Toshiharu 4511
Kakuda, Tomio 4631
Kalashnik, M.V. 4608
Kaleda, K.G. 4137
Kalifa, P. 3345
Kalke, R.D. 6016
Kalmykov, A.I. 5717
Kalnay, Eugenia 3463
Kamat, S.Y. 6038
Kamatani, Akiyoshi 5197
Kamenetskiy, F.M. 4725
Kammen, D.M. 5132
Kanazawa, Toshihiko 4144
Kandel, R.S. 3413, 3414
Kane, R.P. 5060
Kang, C.-K. 5994
Kang, Daiwen 5790
Kang, Xinglun 5828
Kankaanpää, H. 5788
Kannan, K. 4976
Kano, Kazuhiko 3592
Kantardgi, I.G. 5261
Kantha, L.H. 5024
Kapustin, V.N. 6269
Kara, V.I. 4065
Karabashev, G.S. 4484, 6461
Karageorgi, Eleni 4782
Karås, Peter 4951
Karisiddaiah, S.M. 5928
Karl, D.M. 3753, 3758, 5789
Karl, T.R. 3420
Karlson, Bengt 4207
Karn, Barbara 4004
Karner, G.D. 3655

Karoly, D.J. 6255
Karp, W.A. 3833
Karydis, M. 6114
Kashiwai, Makoto 4410
Kasting, J.F. 4110, 4111, 4372
Kastner, Miriam 4643
Kasuya, M. 4056
Kaszubowski, Leszek 5328
Kato, Hidehiro 3736
Katsaros, K.B. 5758
Kaufman, D.S. 3534
Kaveriappa, K.M. 6037
Kawai, Hideo 4531
Kawamura, Hiroshi 3309
Kawamura, Ryuichi 3955
Kawasaki, Yasuhiro 4411, 4431
Kawase, Mitsuhiro 5040
Kay, Anthony 5118
Kaz'min, V.K. 6401
Kazuo, Yamanaka 3682
Kear, A.J. 6007
Keene, J.B. 4667
Keiffer, R.S. 4499
Keigwin, L.D. 5329, 6105
Keir, R.S. 4019, 4395
Keir, Robin 6527
Kel'bert, M.Ya. 4543
Kelder, H. 3401
Kelecy, T.M. 5363
Keller, M.R. 5070
Keller, W.C. 5070
Kelley, D.S. 6349
Kellogg, L.H. 5953
Kelly, A.M. 5547
Kelly, K.A. 6149
Kelts, Kerry 5738
Kenchington, R.A. 4984
Kendall, C.G.St.C. 4799
Kennedy, E. 5103
Kennedy, F.E. 3344
Kennedy, J.A. 5330
Kennedy, R.M. 5098
Kennelly, M.A. 3922
Kennett, B.L.N. 4768
Kennett, J.P. 5339
Kennicutt, M.C. II 3674, 4800, 5221
Kenyon, N.H. 4674, 6322
Keough, M.J. 3824
Kepkay, P.E. 5222, 6485
Kerr, R.A. 3841, 4373, 4558, 5626
Kersten, M. 4047, 5572
Kersten, Michael 3825
Kerstitch, Alex 3845
Kessler, J.O. 4367
Kester, D.R. 4424
Key, J. 5088
Khabakhpashev, G.A. 3319
Khadge, N.H. 5444
Khan, M.A. 4715, 4965
Khanayev, S.A. 6461
Khandekar, G. 4773
Khandekar, M.L. 3956
Khare, Neloy 6360
Khasanov, S.M. 4449
Khoo, H.W. 3751
Khundzhua, G.G. 3853
Khusid, T.A. 4114
Kidder, S.Q. 4966
Kieber, D.J. 3495
Kiefer, D.A. 3764
Kiefer, W.S. 3659
Kiehl, J.T. 6243
Kielland, P. 6107
Kielland, Peter 5644
Kiene, R.P. 4642
Killworth, P.D. 5119
Kil'matov, T.R. 3393
Kim, C.H. 5702
Kim, D.C. 4675
Kim, E.S. 6474, 6475
Kim, K.-H. 4003
Kim, K.-R 5051
Kim, K.T. 6474
Kim, Kiho 5540
Kim, Kuh 5052
Kim, N.W. 3529
Kim, S.-C. 6203
Kim, S.H. 6474
Kim, S.L. 6041
Kim, S.-S. 5688
Kim, S.-Y. 4033
Kim, Yunjin 3914
Kimor, B. 3714
Kimura, G. 5288
King, S.D. 6394
Kingston, P.F. 5573
Kinzler, R.J. 5929, 5930
Kiørboe, T. 3708
Kiratzi, A. 4161
Kirschner, C.E. 5331
Kirwan, A.D. Jr. 6165
Kistovich, A.V. 4544
Kitaigorodskii, S.A. 6229
Kitano, Kiyomitsu 3876
Kitoh, Akio 3968, 3969
Kjerfve, B. 5025
Kjerfve, Björn 3803
Klaes, K.D. 4330
Klein, Bert 3795
Klein, R. 3742
Klemas, V.V. 3858
Klement'yeva, N.Yu. 3920
Kloesel, K.A. 5158
Kloosterziel, R.C. 3387
Klootwijk, C.T. 5388
Klostermeyer, J. 3903
Knaff, J.A. 4586
Knauer, G.A. 3758
Knebel, H.J. 5256
Kneib, R.T. 4251
Knickmeyer, Rainer 6077
Kniewald, Goran 3998
Knight, William 3533
Knoche, Martin 3884
Knoll, A.H. 5332, 5588
Knoppers, Bastiaan 3803
Knowlton, Nancy 3768
Knudsen, K.L. 3593
Knuepfer, P.L.K. 6382
Knutsen, S.-M. 3594
Koba, Hiroyuki 3980, 3982, 3983
Kobayashi, Kazuo 4121, 5914, 6372
Kobayashi, Nobuhisa 6202
Kobluk, D.R. 5843
Koch, M.S. 5822
Koch, R.H. 5012
Kodagall, V.N. 5836
Koeppenkastrop, Dirk 4809
Koh, H.-L. 3826
Koh, L.L. 3751
Kohata, Kunio 3682
Kohler, C.C. 5547
Kohlstedt, D.L. 6406
Kohnen, M.E.L. 3672
Kokorin, A.O. 4566
Kokot, R.R. 4070
Kol'chitskiy, N.N. 3873
Kolesov, G.M. 3651
Komova, O.S. 4778
Kondo, Yutaka 6264
Kondranin, T.V. 4488
Konduforova, N.V. 5622
Kong, L.S.L. 4769
König, Peter 5049
Kono, Tokihiro 4428
Kononen, Kaisa 4208
Kononkova, N.N. 3651
Kontar, Ye.A. 3877, 3878, 4407, 4412
Koopmann, Christiane 3550
Kopnichev, Yu.F. 4770
Korotenko, K.A. 6516
Korsakov, O.D. 4154
Korstga'rd, J.A. 6431
Kortum, Gerhard 4355
Korzeniewski, Kryzysztof 6032
Korzh, V.D. 4039
Korzhikova, L.I. 6290
Koseff, J.R. 4548
Koshlyakov, M.N. 3921
Kostaschuk, R.A. 6329
Köster, Marion 6031
Kostrichkina, Ye.N. 4846
Kostyanoy, A.G. 3879
Kotani, Yuichi 4847
Kotb, M.M.A. 4888
Koukouras, Athanasios 4889
Kovach, C.W. 5562
Kovachev, S.A. 4771, 4772
Kowalik, Z. 5703
Koyanagi, R.Y. 6439
Kozlenko, V.G. 4795
Kozlik, Edith 4321
Kozo, T.L. 3346
Kozur, H. 3595
Kozur, Heinz 3615
Kraft, J.C. 5256
Kramer, Cynthia 4115
Kramer, J.G. 3759
Kramer, J.R. 4026
Kramer, K.J.M. 4048
Kranz, H. 5581
Krasnov, S.G. 4684
Krayer, W.R. 5753
Kreyman, K.D. 4464, 4532
Kriews, M. 4047
Krishna, K.S. 4718
Krishna, V.G. 4773
Krishna Murthy, B.V. 3440
Krishnaswami, S. 5794
Kristensen, Erik 5586
Kroening, S.E. 5117
Krogstad, H.E. 3854, 5069
Krohn, C.E. 6314
Krol, M.S. 4331
Krom, M.D. 4209, 5204
Kröncke, I. 5572
Kröner, A. 6395
Krysell, Mikael 4641
Ku, H.-C. 3931
Kuang, Hui 5015
Kuck, H.G. 3745
Kuehl, S.A. 4669
Kuehn, G.A. 3358
Kugeyko, M.M. 4967
Kuglin, Rainer 3966
Kuhnt, Wolfgang 4116
Kuipers, B.R. 4848
Kuittinen, Risto 6217
Kuleshov, A.F. 4484
Kuligin, V.M. 3675
Kul'sha, O.Ye. 4537
Kuma, Kenshi 4849
Kumakura, Toshiro 4612
Kumar, K.V.S. 5798
Kumar, P.V.H. 5725
Kumar, V.S. 5064, 6199
Kumari, L.K. 5574
Kump, L.R. 4111
Künitzer, A. 6476
Kunz, Helmut 3782
Kunze, Eric 3922
Kunzendorf, Helmar 5289
Kuo, B.-Y. 4774
Kuo, E.Y.T. 3376
Kuo, Y.-H. 5766
Kuptsov, V.M. 4094
Kurazhkovskiy, A.Yu. 4719
Kurihara, Taiko 3970
Kuris, Armand 4927
Kuroki, H.B. 4296
Kushnir, Yochanan 5139
Kutner, M.B.B. 4221
Kuzin, I.P. 4771, 4772
Kuz'mina, N.P. 4537
Kuznetsov, A.P. 6480
Kuznetsov, L.L. 4939
Kvenvolden, K.A. 4649
Kwok, Ronald 3907
Kyser, T.K. 4091
Labat, J.P. 6048
Labitzke, K. 5173
Lachapelle, G. 6107
Lachenbruch, A.H. 5447
Lachlan-Cope, T.A. 3412, 4598
Lackschewitz, K.S. 3551
Lafuente, J.G.G. 5697
Lagadeuc, Yvan 5541
Laima, M.J.C. 6302
Laine, E.P. 5333
Laj, Carlo 4125
Lake, J.L. 5230
Lakkis, Sami 3715
Lakshminarayana, J.S.S. 5986
Lallier-Verges, E. 3676
Lalonde, Sophie 6058
Lamb, K.G. 5730
Lamb, P.J. 5140
Lambeck, Kurt 5887
Lampitt, R.S. 4850
Lana, Paulo da Cunha 5517
Lancelot, Christiane 4210
Lancelot, J.R. 4155
Landau, Herbert 5907
Landgraff, Oliver 6077
Landing, W.M. 3511
Lange, M.A. 3329, 3347
Lange, Peter 4900
Langer, E. 3459
Langseth, M.G. 5308
Langston, W.J. 4943
Langway, C.C. 6357
Lao, Yong 6356
Lapenta, W.M. 4609
Lapierre, Henriette 5932
Lapointe, B.E. 6059
Lapota, D. 5987
Laprise, René 4545
Largier, J.L. 5683
Lari, L. 6505
Larichev, V.D. 3400
Larouche, Pierre 4450
Larsen, J.C. 4413
Larsen, Jacob 6069
Larson, R.J. 4851
Larson, R.L. 4156, 5380, 5420
Larsson, Bertil 6482
Larsson, Ulf 6109
Larter, Steve 6443
Larue, D.K. 3596, 4171
Laskar, J. 4106
Laslett, R.E. 3466
Lassen, Carsten 4180
Lassus, Patrick 4938
Laszlo, I. 4554
Latasa, M. 5979
Latha, N. 6036
Latham, J. 3445
Latif, M.A. 3294
Latouche, C. 6063
Latouche, Claude 5290
Lau, K.-M. 4588, 4591
Lau, N.-C. 5139, 5141, 5767
Laure, P. 6231
Laval, Philippe 5479
Lavelle, J.W. 5874
Lavery, B.M. 6255
Lawson, J.S. 5764
Lawton, J.H. 4962

Lawyer, L.C. 4801
Laybourn-Parry, Johanna 4298
Layer, P.W. 6395
Lazarchik, A.N. 4380
Lazaryuk, A.Yu. 3904
Leakey, R.J.G. 4928
Leatherland, T.M. 5827
LeBlanc, L.A. 6115
LeBlanc, L.R. 3377, 3552
Le Bouteiller, Aubert 4196, 6452, 6462
Lecar, Myron 6145
Lechner, Wolfgang 6108
Lechuga Deveze, C.H. 3705, 3718
Leclaire, L. 3676
Lecuyer, Christophe 5932
Ledrew, E.F. 3432
Ledvina, D.V. 6256
Lee, B.W. 4408
Lee, Cindy 6030
Lee, H.K. 3520
Lee, J.-B. 4852
Lee, J.H. 4003
Lee, J.H.W. 6212
Lee, S.H. 4211, 5052
Lee, S.-W. 5642
Lee, SangHoon 4853
Lee, W.G. 5026
Lees, B.G. 5262, 5276
Lees, Veronica 6486
Leese, J.A. 5656, 6097
Legendre, L. 3691
Legendre, Pierre 3711
Lehman, J.T. 5480
Lein, A.Yu. 3743
Lelieveld, Jos 3421
Le Mouël, J.-L. 5410
Lempert, R.J. 6143
Lennon, G.W. 5690
Lenz, Jürgen 3724
Lenz, Walter 4356
Léon, Fernand 4512
Lepparanta, Matti 6217
le Quentrec, M.F. 4122
Lerche, I. 4169
Lerche, Ian 4709
Lerner-Lam, A.L. 5911
le Roex, A.P. 5931
Leuenberger, Markus 6357
Levchenko, D.G. 4412
Levchenko, O.V. 6315
Le Ven, J.Y. 6086
Levin, I.M. 3367, 4483, 4485
Levin, L.A. 4252, 4890
Levin, P.S. 3794
Levinton, J.S. 4307
Levisen, M.V. 5516
Lévy, Alain 3792
Levy, Gad 3410
Lewis, A.G. 5567
Lewis, B.L. 3511
Lewis, J.K. 3856, 3957
Lewis, M.R. 5488
Lewis, R.P.W. 5003
Lewis, T.J. 5739
Lewit, Howard 6272
Leynaert, A. 4027
Li, B. 4451
Li, Fengqi 5685
Li, Fengye 5291
Li, Fuxue 6023
Li, Jian 4431
Li, Jing 5790, 5793
Li, S.F.Y. 3520
Li, W.K.W. 5481
Li, Yingping 4775
Li, Yongqi 5583
Lianza, R.E. 3680
Lie, Ulf 4357
Lieberman, S.H. 5987
Liebezeit, Gerd 4013
Ligdas, C.N. 4732
Lightman, Alan 4364
Lignell, Risto 5791
Lim, P.-E. 3826
Limeburner, Richard 3291, 4406
Lin, C.A. 4559, 5666
Lin, Chuanlan 5750
Lin, Jian 4123
Lin, Kui 5686
Lin, P.-N. 5398
Lin, R.-Q. 6244
Lin, Yu 6509
Lindegarth, Mats 4181
Lindegren, Roger 3888, 5185
Lindsley, W.G. 3314
Lingard, S.M. 3804
Linsey, T.K. 4692
Lipiatou, Elisabeth 5859
Liss, Peter 5498
List, J.H. 5071
Littler, D.S. 6059
Littler, M.M. 6059
Litvinova, Ya.I. 3648
Liu, A.C. 5838
Liu, A.K. 3297
Liu, J.T. 6195
Liu, S.C. 6262
Liu, W.T. 3940
Liu, Xin'an 5072
Livingston, H.D. 3386
Livingstone, Alec 5284
Lizotte, M.P. 4937
Lobel, P.B. 6078
Lobkovskiy, L.I. 4140
Lochmann, S.E. 5984
Locker, S.D. 5333
Lodge, D.J. 4185, 4192
Lofftus, K.D. 5721
Logan, A. 4912
Loganathan, B.G. 4976
Lohmann, G.P. 5888
Lohmann, K.C. 5323, 5853
Lohrenz, S.E. 4854
Lomnitz-Adler, J. 6423
Long, E.R. 4952
Longhurst, A.R. 3503, 3945, 5223
Longuet-Higgins, M.S. 3316, 4513
Lønne, O.J. 3716, 3717
Lonsdale, P. 5912
Loo, H.Y. 4776
Loper, D.E. 4157
López Cortés, D.J. 3718
López-Jurado, J.L. 3298
Lord, S.J. 3460
Lorentsen, S.-H. 4946
Lorenzo, J.M. 4777
Lorenzzetti, J.A. 6252
Lorst, G.O. 4212
Lotufo, G.R. 4286
Lou, G.-P. 4420
Louden, K.E. 5430
Loureiro, A.L.M. 5168
Lourens, L.J. 5889
Loutre, M.F. 4106
Løvlie, Reidar 5325, 5360
Low, K.L. 3751
Lowry, J.K. 4287
Loya, Y. 3742
Loya-Salinas, D.H. 3683
Lu, Peng 5042
Lu, Zhongfa 5684
Lubin, Dan 6265
Lucas, Zoe 5609
Lucchesi, Pia 5554
Lucey, P.G. 3848
Luçić, D. 3719
Ludwig, K.R. 5334
Ludwig, Peter 6079
Lugo, A.E. 6306
Lukashev, Yu.F. 3990
Lukashin, V.N. 4090
Lum, Jackson 5301
Lunde, Bruce 5648
Lund-Hansen, L.C. 4900
Lung, Y.K. 4871
Luria, Menachem 5165
Lurton, Xavier 3378
Luternauer, J.L. 6329
Luther, D.S. 6175
Luther, G.W. III 3484, 3512, 4622
Luther, M.E. 6157
Lutjeharms, J.R.E. 3301, 5048
Luyendyk, B.P. 4783
Luyten, J.R. 4393, 5660
Lydersen, Christian 4244
Lyle, M.W. 5890
Lyle, Mitchell 5004
Lynch, D.R. 3277
Lynch, Michael 4213
Lyon-Caen, H. 5910
Lysanov, D.Yu. 3899
Lysanov, Yu.P. 4492
Lysenko, M.A. 5843

Ma, Shijun 4193
Maa, J.P.-Y. 6203
Maamaatuaiahutapu, Keitapu 6187
Maass, R.L. 4183
Macaulay, M.C. 4919
MacDonald, B.A. 5209
Macdonald, K.C. 4379
MacDonald, Ken 5941
Machhour, Louaï 5292
Machiwa, J.F. 6308
Maciolek, N.J. 4887
Mackas, D.L. 5988
MacKay, H.M. 5061
Mackwell, S.J. 3660
MacPherson, Enrique 6498
Madden, R.A. 4600
Maddocks, R.F. 4923
Madec, Véronique 3744
Maderich, V.S. 6167
Madhupratap, M. 5548
Madsen, J.A. 5913
Madsen, K.N. 6508
Madsen, O.S. 5058
Maeda, Y. 6424
Magenheim, A.J. 5307, 5309
Magoon, L.B. 5439
Mahadevan, A. 5528, 6034
Mahiques, M.M. de 5860
Maillard, A. 6383
Maillet, Noèle 5290
Main, I.G. 4732
Mainardi, F. 6204
Majumdar, R.K. 4728
Makarov, V.G. 3932
Makhortykh, S.A. 4469
Maki, J.S. 4891
Makkaveyev, P.N. 4233
Makkonen, Lasse 3462
Makris, J. 4063, 4132, 4158, 4159, 4164, 4165, 5428
Makris, Jannis 4124, 4128, 4811
Makshtas, Alexander 4481
Malanotte-Rizzoli, Paola 3812, 4971
Maldonado, A. 6418
Malevich, I.A. 4967
Mallin, M.A. 4214, 5989
Malmgren, Björn 5355
Malone, T.C. 4215, 5977
Malpas, J. 4160
Malpas, J.G. 6349
Malt, Sallie 4288
Maltby, E. 5822
Malyshev, A.A. 3904
Mamane, Y. 5777
Mamayev, O. 4358
Manabe, S. 4575
Manahan, D.T. 5972
Manetti, Piero 4138
Mangani, F. 3644
Mange-Rajetzky, M.A. 5317
Manghnani, M.H. 4675
Mangini, Augusto 4058, 4061, 5293
Man'kovskiy, V.I. 4486
Mann, K.H. 4254
Mann, Paul 5416
Mann, S. 3797
Manning, R.B. 3783, 5549
Mantisi, F. 4049
Manville, A.M. II 4340
Marbà, Núria 5000
Marchig, V. 5875
Marchig, Vesna 5294
Marcomini, S.C. 4070
Marcoux, J. 3636
Marienfeld, P. 5875
Marino, B.D. 6358
Marino, Roxanne 6060
Marinone, S.G. 5041
Markarian, R.K. 6073
Marks, F.D. Jr. 5763, 5765
Marks, K.M. 4720
Marmorino, G.O. 3923, 5708
Marques, J.C. 4289
Marr, J.C. 6067
Marra, John 5990
Marrett, Randall 3661
Marsh, J.G. 5027
Marshall, D.F. 6057
Marshall, Eliot 4350
Marshall, H.G. 4238, 4855
Marshall, J.C. 3278, 4320, 5731
Marshall, J.D. 5277
Marshall, R.D. 5753
Marsili, L. 6505
Marston, P.L. 4521
Martí, J. 6402
Martin, J.B. 4643
Martin, J.H. 4216, 5193, 5205
Martin, J.M. 3914
Martin, J.-M. 3994, 4044
Martin, J.W. 3745
Martin, P.A. 5698
Martin, Seelye 6174
Martin, W.E. 4663
Martin, W.R. 5849
Martin, W.W. 5086
Martin. J.W. 4924
Martin-Barajas, A. 3676
Martinez, Fernando 5381
Martinez, Rosa 5981
Martini, I.P. 4695
Martinod, Joseph 6408
Martinson, D.G. 4712
Marty, Yanic 5232
Marushkevich, A.D. 5046
Masahiro, Endoh 5677
Mascle, J. 5839
Mase, Hajime 6102
Masina, S. 6232
Maslanik, J.A. 3348, 3432
Maslov, L.A. 4778
Maslova, N.B. 3868, 4694
Masó, M. 4396
Masó, Mercedes 3700
Mason, R.P. 5784
Mason, S.J. 5142
Masse, A.K. 3889, 4437
Masselink, Gerhard 5263
Massoth, G.J. 5874
Masters. T.G. 5957
Masuda, Akimasa 6277, 6346

Masuku, C.P. 5788
Masumoto, Yukio 3958
Mateer, N.J. 5335
Mathew, Philip 3805
Mathieson, A.C. 3794
Mathiu, P.M. 4903
Mathot, Sylvie 5981
Matsumoto, Takeshi 5834
Matsuno, Takeshi 6213
Matsuyama, Masaji 5709, 6214
Matthews, A. 3708
Mattson, Stefan 4301
Mauffret, A. 6425
Maughan, D.W. 3827
Maul, G.A. 5908
Maurin, A.-F. 5292
Mawson, M.H. 4589
Max, M.D. 6341
May, D.A. 4381
May, R.M. 6135
Mayall, M.J. 4676
Mayer, F. 5909
Mayer, L.M. 3808
Mazar, Reuven 4514
Mazaud, Alain 4125
Mazzei, R. 4695
Mbamalu, G.A.N. 3374
McAdoo, D.C. 4720
McArdle, S.B. 5511
McArthur, J.M. 5850
McCaffrey, Robert 6396
McCallum, Kirk 4905
McCammon, D.F. 3379
McCarthy, J.J. 3720, 4628, 4856, 4857
McCartney, M.S. 3870
McCartney, Michael 4307
McClain, C.R. 3693, 6153
McClanahan, T.R. 6446
McClatchie, Sam 4290, 4815
McConnell, B.J. 4879
McConnell, S.O. 5099
McCook, L.J. 5563
McCormick, M.P. 4750
McCormick, N.J. 4241
McCoy, E.D. 4823
McCreary, J.P. 5042
McCreary, J.P. Jr. 5028
McCreery, C.S. 6438
McDaniel, S.T. 3380, 4515, 5104
McDonald, N.R. 3402
McDougall, T.J. 4409
McDowell, W.H. 4185
McFadden, Phil 5005
McGlathery, K.J. 6060
McGuffie, K. 5757
McIntosh, P.C. 6257
McIntosh, R.E. 5045
McIntosh, W.C. 5361
McKenzie, C.H. 5482
McKenzie, K.G. 4917
McKinney, M.L. 5353
McLachlan, Anton 5511
McLachlan, J.L. 6067
McLain, L.N. 4253
McLaughlin, R.B. 3796
McLean, S.R. 5278
McLennan, S.M. 4779
McMurtry, G.M. 4807
McNutt, M.K. 5414
McPhee, M.G. 3349, 5110
McQuaid, C.D. 5490, 6061
McTiernan, Larry 3538
McWilliams, J.C. 5121, 5122
Meacham, S.P. 3403
Mechie, James 4163
Mechoso, C.R. 5745
Meesters, A.G.C.A. 6258
Meesters, E. 5512
Mehlum, F. 5569
Mehta, A.J. 3540
Mehta, V.M. 5143
Mei, C.C. 5073
Meincke, Jens 6186
Meissner, R. 4731
Melamed, Yehuda 3819
Meldahl, K.H. 5898
Mélières, M.-A. 4677
Melkert, M.J. 5279
Melles, Martin 6359
Mellor, G.L. 5024, 5653
Mel'nikova, O.N. 4668
Melsom, Arne 3908
Menard, Yves 5021
Mendes-Victor, L.A. 4760
Meng, Z.W. 4713
Menge, B.A. 5973
Menning, M. 5357
Menon, N.R. 3805
Men'Shenina, L.L. 4291
Mercer, G.N. 3315
Meredith, J.A. 6348
Merino, Martín 3700
Merino, Martin 4011
Merrett, N.R. 4880
Merrifield, M.A. 3900
Mertz, D.F. 3662
Mertz, G. 6168
Mertz, Gordon 4546
Metal'nikov, A.A. 4605
Metaxas, A. 5567
Metaxas, D.A. 3411
Metcalfe, I. 3597
Metzl, N. 4010
Meyer, A.W. 4738
Meyer, H. 4150
Meyer, Peter 6134
Meyer-Reil, L.-A. 6031
Meyers, Gary 3264, 3265
M'Gonigle, Michael 6116
Miao, Yutian 6188
Michael, Andrew 6136
Michaelis, Walter 4139
Michaud, Réjean 4559
Michel, R.L. 4395
Michelato, Antonio 6182
Michida, Yutaka 6192, 6221
Midun, Zamali 3826
Mihalopoulos, N. 5187
Mijares, A.J. 3725
Miles, A.K. 5575
Miles, P.R. 4787
Millán Núñez, Roberto 5992
Millán-Núñez, Roberto 5997
Miller, A.I. 3535
Miller, A.J. 4576, 5747
Miller, C.B. 4217, 4218, 5483
Miller, C.D. 3962
Miller, D.G.M. 4341, 4979
Miller, D.M. 3645
Miller, David 3438
Miller, G.H. 3422
Miller, H. 4150, 4731
Miller, L. 4417
Miller, M.C. 5579
Miller, M.J. 5172
Miller, N.L. 5576
Miller, R.G. 4802
Miller, S.J. 3316
Miller, T.L. 3404
Millero, F.J. 3485, 4004
Millet, Bertrand 5991
Milliff, R.F. 5029
Mills, D. 3729
Milner, P.R. 6316
Milsom, John 4733
Minkoff, J. 4516
Minnis, Patrick 3416
Minoura, Koji 5280
Minster, J.F. 5030
Mirabel, A.P. 3405, 3924
Miranda, L.B. 5025
Mirlin, E.G. 4751
Mishima, Yasufumi 5815
Missiaen, T. 5838
Mitchell, B.G. 5095, 5484
Mitchell, D.J.W. 5440
Mitchell, J.F.B. 4560
Mitchell, J.G. 3760
Mitchell, J.L. 5680
Mitchell, R. 4891
Mitnik, L.M. 5717
Mitten, P.T. 3462
Miura, Kazuhiko 4612
Miura, Tomoyuki 5552
Miyata, Motoyasu 5710
Mo, K.C. 3463
Moebus, K. 5526
Mognard, N.M. 6148
Mohr, P. 4063
Mokady, O. 3742
Molander, Sverker 5577
Molchanov, S.A. 4452
Mølgaard, John 3333
Molinari, R.L. 5637
Möller, L. 4165
Möller, P. 6414
Mollo-Christensen, Erik 3297
Molyneaux, S.J. 3757
Mommaerts, J.P. 4820
Monaco, André 5344
Monastersky, Richard 4374, 4375, 5627
Moncreiff, C.A. 6064
Monente, J.A. 6189
Monin, A.S. 3405, 3885, 3924
Monreal Gómez, M.A. 3295
Monserrat, J.M. 4322
Montagna, P.A. 3746, 4934, 6016
Montani, Shigeru 5815
Monteiro, P.M.S. 4186
Montgomery, D.R. 4066
Montoya, J.P. 3720, 4857
Moore, A.M. 5067
Moore, J.C. 4143, 4598
Moore, P.A. 3809
Moore, P.G. 4925, 6042
Moore, R.M. 5178
Moores, E.M. 3631
Moos, Daniel 5242, 5949
Mopper, Kenneth 3495
Moraes, C.M. 5574
Morales-Zamorano, L.A. 4219
Moran, S.B. 5178
Morang, Andrew 5264
Morassutti, M.P. 4482
Morcos, S. 4358, 5183
Moreira, F. 6481
Morel, F.M.M. 4220, 5217, 5485
Moreshet, S. 5133
Morgan, G.J. 4187
Morgan, J.P. 4123
Morgan, Paul 6426
Morin, R.H. 5242, 5310, 5369
Morison, M.L. 6205
Morley, C.K. 4696, 5382
Morlière, Alain 6156
Morreale, S.J. 5007
Morris, C.C. 4200
Morrisey, D.J. 6017
Morrow, Rosemary 6169
Morse, J.W. 3486
Morton, A.C. 5284
Morton, J.L. 5362, 5394
Morton, R.A. 4803
Morton, S.L. 6068
Mosetti, Ferruccio 3279, 3304, 3305
Mosetti, Paola 3279
Moshkovitz, Shimon 4115
Mossmann, J.-R. 3553
Mostalev, L.I. 6470
Moullade, Michel 4116
Moum, J.N. 3392
Moureau, Z. 4318
Moyes, A.B. 6391
Mudelsee, Manfred 4058
Mudge, D.C. 5336
Mudie, P.J. 6354
Mudryk, Zbigniew 6032
Muench, R.D. 3350, 4386
Muenow, D.W. 5933
Muffler, Patrick 5876
Mühe, Richard 5305, 5396, 5406
Mulholland, P.J. 4098
Mullen, M.W. 5331
Müller, H.-G. 4292
Müller, Klaus 3943, 3966
Müller, Peter 3320, 5711
Müller, R.D. 4780
Müller, T.J. 5672
Müller, Tilman 5906
Mullins, H.T. 4665, 5861
Mulvenna, P.F. 5807
Münchow, Andreas 4414, 4437
Mundell, Ian 6137
Muñoz Anderson, M.A. 5992
Munro, G.R. 3834
Munson, C.G. 4775
Muramoto, J.A. 3513
Murasaki, M. 5405
Murdmaa, I.O. 5443
Murkin, E.J. 3750
Murkin, H.R. 3750
Murphy, J.B. 5389
Murphy, N.J. 4112
Murphy, P.P. 3959
Murray, A.J. 3835
Murray, A.P. 4953
Murray, J.W. 3269, 3493, 3816, 5559
Murray, R.W. 5862
Murrell, J.C. 6486
Murthy, C.R. 3889
Murton, B.J. 6087
Murty, P.S.N. 5856
Murty, T.S. 5703, 5705
Murty, V.S.N. 6170
Murugan, A. 6018, 6131
Muscatine, L. 3747
Musman, Steven 4453
Musso, B. 4892
Mutterlose, Jörg 5899
Myasnikov, Ye.V. 4488
Myers, C.R. 3761
Myers, F.S. 3842
Myers, J.D. 5400, 5401
Myers, P.G. 6171
Mysak, L.A. 4563, 5718

Na, J.-Y. 5642
Naar, D.F. 5383
Nabatov, V.N. 4577
Nábělek, J.L. 5911
Naciri, Mamoun 5073
Näf, Carina 6309
Naganobu, Mikio 3857
Nagata, Masashi 3977
Nagata, Yutaka 4430, 6192
Naidu, G.R.K. 3470
Naidu, P.D. 5295
Nair, Ravindernath 6529
Nair, V.R. 5574
Najjar, R.G. 5194
Nakada, Masao 5887
Nakaguchi, Yuzuru 3993
Nakajima, Takashi 5938
Nakamura, Eizo 5425
Nakamura, Shigehisa 5429
Nakamura, Yoichi 3666

Nakanishi, Ichiro 5954
Nakanishi, Masao 5914, 6372
Nakata, J.S. 5948
Nakonieczny, Jan 5993
Naldi, M. 4917
Nance, R.D. 5389
Narayana, A.C. 6342
Narro, M.L. 4906, 4907
Nash, A.D. 5610
Nash, A.J. 3442
Nasir, Sobhi 4781
Nasr, S.M. 3554
Nath, M.J. 5141
National Ocean Service 4438, 4439
Navon, I.M. 4332
Navrotskiy, V.V. 3904
Nayak, B.U. 5064, 5253, 6199, 6324
Naylor, E. 4922
Nazarov, A.A. 4472
Nealson, K.H. 3761
Nederbragt, A.J. 5900
Nedospasova, L.V. 6368
Neele, Filip 6427
Neelin, J.D. 5144
Negi, J.G. 5918
Negri, R.M. 4858
Neill, W.E. 4821
Neklyudov, V.I. 4544
Nelkin, Mark 3933
Nelson, A.R. 3791
Nelson, C.A. 6514
Nelson, C.S. 3441, 5196
Nelson, D.M. 4040, 4224, 5486, 5487
Nelson, R.K. 5181, 5182
Nemirovskaya, I.A. 3519
Nemoto, Naoki 4656
Nemoto, Takahisa 4870, 5552
Nessim, R.B. 5235
Neumann, Charles 3461
Nevins, J.L. 4856
Newell, R.C. 3827, 4319
Newell, R.E. 4578, 6283
Newhouse, John 6520
Nguyen, M.-H. 4908
Niazi, Mansour 4782
Nichols, M.M. 4099
Nicholson, Craig 4783
Nicholson, M.D. 5611
Nickell, T.D. 6042
Nicol, Stephen 4342
Nicolaidou, Artemis 4897
Nicoll, N. 3735
Nielsen, B. 4698
Nielsen, J.W. 4599
Nielsen, Jan 5985
Nielsen, R.H. 5006
Nielsen, T.G. 4203
Niemeyer, H.D. 4078, 4345
Niemi, Åke 6128
Niemi, T.M. 4784
Nigam, R. 5337
Nigam, Rajiv 6360
Nihoul, C.C. 3828
Nikolaevskii, V.N. 4497
Nikolayev, I.Ye. 4804
Nilsson, Per 4207
Nimura, Yoshihachiro 6523
Nishikawa, Teruaki 4913
Nittrouer, C.A. 5324
Niu, Yaoling 5923
Nixon, W.A. 3351
Noble, M.A. 6196
Nof, Doron 5013
Nogués-Paegle, Julia 3974
Nohda, S. 5405
Nojima, O. 5829
Nollkaemper, André 4977
Nolting, R.F. 3995, 4006
Noordeloos, A.A.M. 4861
Nordeng, T.E. 4596
Nordstrom, K.F. 4073
Norell, M.A. 4706
Noriki, Shinichiro 4635
Norman, Colin 4351
Norquist, D.C. 5159
Norris, D.R. 6068
Norris, J.G. 4343
Norris, R.D. 3807
Nosov, V.N. 4382, 4454
Nöthig, E.-M. 4365, 4859
Novacek, M.J. 4706
Novarini, J.C. 4499
Novitsky, Mikhail 5754
Nowell, A.R.M. 5855
Nowlin, W.D. Jr. 3890
Noyes, J.E. 4985
Nucciarone, J.J. 3439
Nuchka, Douglas 6239
Nurser, A.J.G. 3278, 4320, 5731
Nuttle, W.K. 4059
Nybroe, Ole 3762
Obol'yaninova, V.G. 4174
O'Brien, D.M. 5592
O'Brien, J.J. 6157
O'Brien, S.M. 6492
Obuz, Temel 3280
Obzhirov, A.I. 4752
Ocean Drilling Program 5311 6361, 6384
Ochadlick, A.R. Jr. 5043
Ochoa, J. 3308
Ockenden, M.C. 3530
O'Connell, R.J. 6397
O'Connor, T.E. 5441
O'Connor, W.P. 3306
Odada, E.O. 4810
Odate, Kazuko 4847
O'Dor, R.K. 6009
Odum, W.E. 6025
Oey, L.-Y. 3394
Ogasawara, Hiroshi 4785
Ogawa, Hiroshi 5195
Ogawa, Masaki 3663
Oggiano, G. 4695
Oglesby, R.J. 3598
Ogura, Norio 5195, 5236
Oh, J.R. 6282
Öhman, Peder 3996
Ohmura, Atsumu 4479
Ohshima, K.I. 4429
Ohshima, Takashi 3972
Ohtani, Kiyotaka 4415
Ohwada, Kouichi 4273
Ohwaki, Atsushi 5709, 6214
Okada, Kikuo 6270
Okaichi, Tomotoshi 5815
Okano, Kenta 5955
Okouchi, S. 5829
Okuda, Kuniaki 4421
Okuroğullari, A.H. 3635
Olafsson, Jón 5809
Olańczuk-Neyman, K.M. 5537
Oliver, G.A. 5822
Olivera, C. 6428
Olsen, C.R. 4098
Olson, D.B. 4533
Olson, Peter 4156
Oltman-Shay, J. 3916
Olucha, J.C. 3468
O'Mongain, E. 6510
Omstedt, A. 6218
Omura, Akio 4054
Ona, Egil 5097
O'Neil, J.M. 6065
O'Neil, J.R. 5281, 5402
Ong, C.P. 3520
Ong, David 5618
Ong, J.E. 6163
Onofri, V. 3719
Onstott, Robert 5527
Orange, D.L. 6338, 6350
Orchard, B.J. 4517
Orcutt, J.A. 6410
Øresland, Vidar 4293
Orfanidis, S. 4308
Orlanski, I. 3451
Ormsby, Bernard 3784
Orr, J.C. 4626, 5227, 6138, 6303
Orsi, T.H. 6293
Orson, R.A. 4086, 6330
Osaka, Yasushi 5280
Oschmann, Wolfgang 3748
Osipova, I.L. 4489
Oskam, Dick 6181
Osler, J.C. 5430
Osterman, F.A. 5230
Ostrovsky, A.A. 4786
O'Sullivan, D.W. 5179
Osuna López, J.I. 3555
Ottens, J.J. 5900, 6190
Ottley, C.J. 5778
Ou, H.W. 3395
Ou, Y.-R. 3406, 3407
Ouddane, B. 5206
Oudin, J.-L. 5292
Ouseph, P.P. 5231
Overland, J.E. 3462, 3960
Overmann, Jörg 6033
Oviatt, C.A. 4646
Owen, R.W. 4221
Owens, N.J.P. 4222, 5808, 6486
Owens, W.B. 3281
Ozard, J.M. 3381
Ozmidov, R.V. 3885
Ozsoy, Emin 3269
Pacheco-Ruiz, Isai 6504
Padilla Pilotze, A.R. 3295
Paerl, H.W. 4271, 5989
Paetzel, Matthias 5863
Páez Osuna, Federico 3555
Page, H.M. 6477
Pagès, F. 3721
Pagès, Francesc 3707
Paine, R.T. 3689
Pal, P.K. 3452
Palacios M., Roberto 5744
Paladino, F.V. 5007
Palais, J.M. 5891
Palanques, Albert 5816
Palca, Joseph 3839
Paldor, Nathan 5013
Pallemaerts, Marc 4986
Pallister, J.S. 4753
Palmer, M.R. 5877
Palmer, T.N. 5154, 5172
Palmer-Julson, A. 5901
Paluch, I.R. 5751
Palumbi, S.R. 6084
Pan, Yuqiu 6191
Pan, Zhi 6253
Panageotou, William 3549
Pananpunnayil, S.U. 5550
Panchenko, A.R. 3429, 4584
Panda, Satchidanan 3552
Pandarinath, K. 6342
Pandey, O.P. 5918
Pandey, P.C. 5237, 5241
Pandya, Naresh 5933
Panella, Sergio 6154, 6295
Pankratov, K.K. 3938
Pansini, M. 4892
Panteleyev, G.G. 6183
Papadimitriou, E. 4161
Papageorgiou, E.J. 5678
Papanastassiou, D. 5910
Papazachos, B. 4161
Papike, J.J. 5399
Paquette, R.G. 5667
Paranjape, M.A. 5468
Parés, J.M. 6385
Park, J.-S. 5994
Park, Jeffrey 3598
Park, S.C. 4697
Park, Y.-A. 5267
Park, Y.-C. 6310
Park, Y.-H. 3880
Parker, W.R. 3531
Parkinson, C.L. 5089
Parra, Mario 5296
Parrish, D.F. 3460
Parson, Lindsay 6384
Partensky, Frédéric 6465
Parulekar, A.H. 6015, 6019, 6027
Pascal, G. 6429
Pashin, S.Yu. 4454
Pasquarè, G. 5924
Passerini, Pietro 4162
Pathack, B. 3939
Patience, R.L. 5224
Patterson, M.R. 4822
Pattiaratchi, C.B. 3881
Paul, J.H. 5525
Pauley, P.M. 5155
Paull, C.K. 3556, 4685, 4886
Paulsen, D.M. 4271
Pautot, G. 4131
Pavía, E.G. 5111
Pavičić, J. 4274
Pavlenkin, A.D. 4794
Payne, C.M. 4276
Payne, J.F. 4948
Peacor, D.R. 5281
Peakman, T.M. 5851
Peal, K.R. 5593
Pearce, A.F. 3882, 4366
Pearson, P.N. 5902
Pearson, T.H. 6445
Pease, C.H. 3350
Pease, C.M. 4707
Peckol, P. 5564
Pedersen, M.F. 5565
Pedersen, T.F. 4100, 4698
Pedley, T.J. 4367
Pedlosky, Joseph 5657
Peebles, P.C. 4099
Peerzada, Naseem 4321
Pelinovskiy, Ye.N. 4446
Pelletier, E. 4956
Peloquin, R.A. 5734, 6096
Peltier, W.R. 4701
Pelto, M.S. 3352
Peltzer, R.D. 5112
Péna, Geneviève 3521
Peña, M.A. 5488
Pendoley, Kellie 5578
Peng, L. 4588
Peng, T.-H. 5215, 5225
Pennock, J.R. 3369
Peñuelas 6499
Peper, Tim 6430
Peppler, R.A. 5140
Pereira, E.B. 5168
Pereira, W.E. 4954
Pereskokov, A.I. 3925
Peresypkin, V.I. 6287
Pérez, F.F. 5053
Pérez, Fiz F. 3704
Pérez-Molero, J.M. 3883
Perissinotto, Renzo 5489, 5490, 6061
Perissoratis, C. 4678
Perseil, E.-A. 5967
Perthame, B. 6088

Pertsev, B.P. 4440
Perttilä, M. 4650
Peter, J.M. 5878
Peterman, R.M. 6116
Peterman, Zell 5415
Petersen, K. 6431
Peterson, I.K. 3353
Peterson, J.A. 6026
Peterson, R.G. 5044
Petersson, N.A. 6101
Petrick, Gert 4050
Petrie, B. 5020
Petrova, T.M. 5600
Petty, G.W. 5758
Petukhov, Yu.V. 4494
Peyret, R. 6231
Pfeffer, R.L. 6260
Pfeiffer, T.F. 4414
Pfennig, Norbert 6033
Philander, S.G.H. 5141, 5145
Philbrick, Valerie 5469
Phillips, A.C. 6333
Phillips, C.A. 4281
Phoel, W.C. 4630
Photiadis, D.M. 4518
Piacsek, Steve 3364
Picco, P. 6247
Picer, Mladen 6311
Picer, Nena 6311
Pichon, J.-J. 5297
Pickering, K.T. 6322
Pickering, M. 4698
Picot, Bernadette 3521
Piepgras, D.J. 5795
Pierce, S.K. 6492
Pierre, Catherine 5896
Pierrehumbert, R.T. 5730
Pierson, T.C. 5409
Pierson, W.J. Jr. 5074
Pilipenko, A.I. 4154, 6369
Pillai, K.C. 6336
Pilling, E.D. 4928
Pimm, S.L. 4963
Pinardi, N. 6232
Pineau, F. 4136
Pineschi, Laura 6117
Pinglot, J.-F. 4677
Pinheiro, L.M. 4787
Pinkel, R. 5016
Pinker, R.T. 4554
Piotrowica, S.R. 6522
Piper, D.J.W. 4678
Piper D.J.W. 5338
Pironneau, Olivier 3929
Pisias, Nick 4693
Pitcher, G.C. 3732
Piterbarg, L.I. 4452
Piton, Bernard 6180
Piuchard, S.L. 5525
Plant, W.J. 5070, 5704
Plater, A.J. 4661
Platt, Trevor 4223, 4860
Platzman, E.S. 5384
Plavšić, M. 4005
Pleijel, Fredrik 4914
Ploug, Helle 4180
Poag, C.W. 4739
Podgorny, Igor 4481
Podladchikov, Y. 6432
Pohl, Wolfgang 5362
Poisson, A. 4358, 5183
Pokrovskiy, B.G. 4788
Poliakov, A. 6432
Polikarpov, G.G. 4624
Pollard, R.T. 5658
Polnikov, V.G. 4455
Polonsky, A.B. 3433
Poma, A. 3620
Ponce, Lautaro 5915
Pond, S. 4998
Ponte, R.M. 3961
Poolton, N.R.J. 4661
Popov, E.A. 4118
Poppe, L.J. 5298
Popstefanija, Ivan 5045
Portnoy, J.W. 4059
Posedel, Nives 3504
Potami, A.R. 4347
Potekhin, A.Yu. 3368
Potemra, T.A. 4359
Poths, Harald 3611
Pourchet, Michel 4677
Pousa, J.L. 5063
Powell, David 3512
Powell, G.V.N. 6024
Powell, R.E. 5956
Poziomek, E.J. 3522
Pozzi, J.P. 4126
Prabhakara, C. 5759
Prabu, S.K. 5528, 6034, 6487
Prager, E.J. 5031
Prahl, F.G. 5890
Prakash, J.W.J. 5755
Prandke, Hartmut 5726
Prange, Andreas 3550
Prasad, K.S. 5995
Pratt, L.M. 4671
Preen, Anthony 3829
Prego, Ricardo 3282, 4014, 5491, 6172
Prell, W.L. 3576
Preller, R.H. 5719
Preller, Ruth 6216
Prentice, I.C. 5885
Prescott, Jacques 6008
Preston, M.R. 4028, 5171, 5233
Price, J.A. 5157
Price, J.F. 5032
Price, N.B. 4100
Price, N.M. 4220, 5485
Priddle, J. 4222
Pridmore, R.D. 4955
Prince. P.A. 4901
Prince, R.C. 6118
Prins, R.A. 5536
Prinsenberg, S.J. 3353
Pritchard, R.S. 3354
Proctor, R. 5696
Prodduturu, Prabhakar 4028
Prodehl, Claus 4163
Provrbio, E. 3620
Pruell, R.J. 5230
Pshenina, I.A. 4751
Pszenny, A.A.P. 5779
Puchelt, H. 5912
Pugh, P.R. 4915
Pujades, L.G. 6409
Puls, W. 4051
Purcell, G.H. Jr. 6089
Purdie, D.A. 5553
Purdy, G.M. 4769, 5920
Purga, Nicolò 3305
Puri, K. 6274
Purushothaman, A. 6036
Putrevu, Uday 5673
Pyle, D.M. 3423
Pyrkin, Yu.G. 4668

Qi, Jianhua 5685
Qiu, Xinfang 5100
Qiu, Y.J. 3523
Quadfasel, Detlef 4416
Quay, P.D. 5226
Quéguiner, B. 4224
Quéguiner, Bernard 3893
Quemeneur, Michelle 5232
Quinn, G.P. 3824, 6013
Quinn, P.K. 5823, 6267
Quirós, Guillermo 6197
Rabinowitz, P.D. 4970
Rack, F.R. 5901
Radach, G. 4820
Radach, Günther 4539
Radder, A.C. 5075
Radke, L.F. 5783
Radojević, Miroslav 6515
Radok, Uwe 4561
Radtke, Ulrich 4054
Raftery, A.E. 5713
Raftopoulos, Evangelos 4987
Raghukumar, S. 6503
Rahman, Atiur 3617
Rahmani, R.A. 6335
Railsback, S.F. 6119
Rainbow, P.S. 4925
Rajan, S.D. 3557
Rajendran, N. 6035
Rajendran, Narasimmalu 5529
Rakofsky, Allan 5249
Rakovskiy, E.Ye. 3675
Rakusa-Suszczewski, Stanislaw 4290
Ram, Anirudh 5830
Rama Devi, P. 3470
Ramaiah, N. 6027
Raman, N.N. 5146, 6248
Raman, Sethu 3449, 4574, 5138
Ramanathan, V. 6528
Ramaswamy, V. 6529
Ramm, A.E.L. 4644
Ramsden, Dave 4470
Ramus, J. 5564
Randall, R.E. 6211
Randall, R.H. 4662
Ranelli, P.H. 3355
Raney, D.C. 3866
Rangin, Claude 3627
Ranz-Guerra, C. 3382
Rao, A.S. 5302
Rao, C.P. 5196, 5299
Rao, C.R.N. 6150
Rao, Ch.M. 5295
Rao, I.N. 5211, 6296
Rao, K.V.R. 4957
Rao, R.R. 5798
Rao, S.M. 5864
Rao, V.B. 3967
Raper, S.C.B. 5740
Raphael, M.N. 4590
Rapp, J.B. 4649, 4954
Rasmussen, E.A. 4596, 4597
Rasmussen, T.L. 4117
Ratcliff, D.W. 4653
Rau, G.H. 4029, 4645
Raul, Robin 3934
Raup, D.M. 4708
Rausch de Traubenberg, Catherine 4938
Raven, J.A. 5492
Ravizza, G. 3491
Raybould, A.F. 6057
Raymundo, C.C. 5233
Rayzer, V.Yu. 4465
Rea, D.K. 3589
Read, R.J. 4973
Reader, S. 4956
Ready, S. 6261
Reddy, M.S. 4957
Redondo, J.M. 3408
Reeburgh, W.S. 3514
Reed, D.J. 4261
Reed, R.J. 5766
Reed, R.K. 4417, 6185
Reeh, Niels 3599
Rees, H.L. 5612
Regier, L.A. 5658
Reible, D.D. 5754
Reichardt, W. 4267
Reid, Alastair 5014
Reid, Amanda 4881
Reid, I. 4692
Reid, J.W. 3785, 4294
Reid, R.T. 5530
Reifenhäuser, Werner 6120
Reimers, C.E. 5556
Reimold, W.U. 3664
Reiners, W.A. 6327
Reinke, D.L. 4601
Reinson, G.E. 6335
Relexans, J.-C. 4272
Renger, E.H. 3703
Renk, Henryk 5993
Repeta, D.J. 3722
Republic of South Africa 5645
Resch, François 4534
Resnyanskiy, Yu.D. 4579
Reutov, V.P. 4471
Reverdin, Gilles 4392, 6156
Rex, D.C. 4743
Rey, Francisco 4825
Rey, Vincent 5076
Reyes, A.G. 4753
Reyes, Enrique 4011
Reynolds, N.D. 3404
Reynolds, Suzanne 6343
Rheinheimer, Gerhard 3508
Rho, H.K. 5052
Riahi, D.N. 4547
Riaux-Gobin, Catherine 3795
Ribera, M.A. 6062
Ribes, T. 6054
Ribic, C.A. 5519
Riccardi, A.C. 3600
Richard, P.R. 4177
Richards, M.A. 3665, 5945
Richardsen, G. 3601
Richardson, B.J. 4953
Richardson, Katherine 4225
Richardson, P.L. 6184
Richter, F.M. 5796
Richter, H. 4164
Richter, Helmut 4128
Ricketts, C. 4926
Ridderinkhof, H. 3434
Ridgeway, I.M. 5827
Ridgeway, R.G. Jr. 5792
Riebesell, Ulf 5817
Riech, Volkher 5300
Riedel, W.R. 5903
Riegman, Roel 4861
Riemann, Bo 3762, 5985
Riera, T. 6499
Ries, J.E. 3356
Rihm, R. 4063, 4132, 4164, 4165
Riley, J.J. 3321
Riley, J.L. 4505
Riley, L.A. 3558
Rio, Michel 3772
Rios, A.F. 3282, 5053
Ripa, P. 5120
Ripa, Pedro 6197
Risbey, J.S. 6241
Risk, M.J. 4081
Ritschard, R.L. 6304
Rittschof, D. 4891
Ro, Y.J. 3275
Robert, Christian 5339
Roberts, A.J. 3315
Roberts, H.H. 4797, 5870
Roberts, P.H. 4714
Robertson, A.H.F. 3602
Robertson, J.E. 4868
Robeson, S.M. 3425
Robinson, A.R. 4971, 5029, 5639
Robinson, J.M. 4111
Robinson, P.T. 6349
Roca, E. 6385
Roca, Eduard 5916, 6433
Rocha, A. 3963
Rocha, C.E.F. da 4295
Rock, N.M.S. 4060
Rodda, Peter 5301

Rodier, Martine 4196, 6462
Rodríguez, E.M. 4322
Rodríguez, Ernesto 3914
Rodríguez, Luis 5689
Rodriguez-Perea, A. 6321
Roedder, Edwin 4654
Roest, W.R. 3628, 4780, 6373, 6374
Rogers, C.S. 4253
Rogers, H.R. 4651
Rogers, J.C. 4590
Rogers, John 5837
Rogerson, Andrew 4298
Rohardt, Gerd 3884
Rohling, E.J. 4699
Rojas, C.M. 5169
Rojas, Carlos 5170
Roman, M.R. 6065
Romananko, V.I. 4619
Romero, R.C. 4296
Rona, P.A. 3568, 5934
Ronen, Daniel 5727
Rontani, J.-F. 3471, 6080
Roof, S.R. 6362
Ropelewski, C.F. 5628
Roper, C.F.E. 4245
Roper, D.S. 6075
Rosborough, G.W. 5363
Rosenbauer, R.J. 3570
Rosenberg, A.A. 4980
Rosenberg, A.P. 3931
Rosenberg, M.A. 4443, 5252
Rosenberg, R. 6445
Rosenberg, Rutger 4893
Rosenberger, D.E. 5987
Rosencrantz, Eric 5416
Rosmond, T.E. 5748
Rosoff, D.B. 5354
Rossi, R.E. 5969
Rossi, S. 5839
Rossman, G.R. 4755
Roth, P.H. 3617
Rothschild, B.J. 5598, 6447
Rothstein, L.M. 5040
Rottier, P.J. 6219
Rouchy, J.-M. 6363
Rountree, R.A. 6478
Roux, Michel 5513
Røv, Nils 4946
Rowe, G. 4894
Rowe, G.T. 4630
Rowell, D.P. 6249
Rowland, S.J. 4673
Rowland-Faux, L.M. 6492
Rowley, D.B. 5796
Rozman, Lev 3280
Rozwadowska, Anna 5736
Rubelowsky, K. 5983
Rubin, A.M. 4789
Rubin, S.G. 3935
Rubinstein, Ellis 4350
Rudenjak-Lukenda, M. 3723
Rudnick, R.L. 4779
Rudstam, L.G. 5493
Ruedy, R.A. 5741
Rueter, J.G. 4220
Rufenach, C.L. 5017
Rufenach, Clifford 5527
Ruff, L.J. 6435
Rüger. H.-J. 3763
Ruiz, G.M. 4188
Rule, J.H. 5797
Rullkötter, J. 5851
Runcorn, S.K. 5364
Ruprecht, Eberhard 3427
Russell, G. 5561
Russo, Anthony 4889
Russo, R.M. 5385
Rust, I.C. 4344
Rutgers van der Loeff, M.M. 4030
Rutledge, Ph. 4282
Ryan, H.F. 5390
Rybak, S.A. 4469
Rye, D.M. 4688
Ryg, Morten 4244

Saager, P.M. 3479
Sabadini, Roberto 5921
Sabat, F. 6321
Sabinin, K.D. 4472
Sadhuram, Y. 5147, 6250
Sadler, W.D. 6513
Sadowski, M. 5131
Saegusa, H. 5829
Saffir, H.S. 5633
Sagalevich, A.M. 4686
Sagan, Carl 3847
Sager, W.W. 4657
Said, M.A. 3283
Saidova, Kh.M. 4302
Saigal, G.C. 6443
Saino, Toshiro 4636
Saint-Marc, Pierre 6364
Saint Martin, J.-P. 6363
Sakai, Hitoshi 6475
Sakai, Tetsuo 6102
Sakamaki, Fumio 6271
Sakano, Seiji 5197
Sakshaug, Egil 4226, 4227
Salas de León, D.A. 3295
Salashin, S.G. 3429, 4584
Salat, J. 4396
Salat, Jordi 5659
Salby, M.L. 3424
Saliot, A. 3523, 4015
Saliot, Alain 4648, 5859
Salo, S.A. 3350
Sambridge, Malcolm 3811
Samelson, R.M. 3296, 5113
Sameoto, D.D. 5996
Sammarco, P.W. 4081, 6011
Sample, Jim 4143
Sampou, P. 4646
Samson, C. 6317
Sancetta, Constance 4312, 5494
Sanchez, A.L. 3492
Sanchez, R. 4241
Sanders, Frederick 4615
Sandwell, D.T. 4722, 5365
Sandy, M.R. 3618
Sanfilippo, Annika 5903
Sanford, Lawrence 3549
Sanford, T.B. 3922
Sanin, S. 5234
Sansone, F.J. 4625
Santala, M.J. 5018
Santamaría del Angel, Eduardo 5997
Santanach, Pere 6318
Santangelo, Giovanni 5554
Santelices, Bernabé 4936
Santhanam, R. 6000
Sanuki, Tetsuro 6193
Sapozhnikov, V.V. 3990, 4034
Sarabia, J.M. 6104
Sarachik, E.S. 3286
Sardá, Rafael 4895
Sarjeant, W.A.S. 6367
Sarkar, Subir 4074
Sarma, N.S. 5211, 6296
Sarma, R.V. 5693
Sarma, Y.V.B. 5712
Sarmiento, J.L. 3946, 4626, 5194, 5227, 5228, 6303
Sarraf, S. 5694
Sasaki, Hidetaka 3978
Sasi, M.N. 3440
Sassen, Kenneth 3447
Satake, Kenji 4456, 4796
Sathiyamurthy, K. 6036
Sathyendranath, Shubha 4223
Sato, Hiroshi 3603
Sato, Ryosuke 6412
Sato, Yoshikazu 4631
Satoh, Hiroo 4228
Satomura, Takehiko 3978
Saunders, R.W. 5123
Sautter, L.R. 5494
Savenko, V.S. 3455, 3988, 3997, 4008
Savenkoff, Claude 6488
Savidge, G. 5998
Savidge, Graham 5807
Savigear, R.A.G. 5594
Savin, S.M. 4702
Sawyer, D.S. 4734, 4747, 5379
Sayed, M. 3357
Sayer, B.G. 6286
Sazhina, T.G. 3921
Sazonov, I.A. 4543
Sborshchikov, I.M. 4140
Scepan, Joseph 5600
Schäffer, H.A. 5077
Schaudt, K.J. 3874
Schauer, Ursula 6186
Schayes, Guy 5752
Scheffner, N.W. 6206
Schellekens, J.H. 3596
Schemel, L.E. 5805
Schepens, P.J.C. 5569
Scherer, R.P. 3604
Schijf, Johan 3480
Schilt, M.P. 5099
Schladow, S.G. 4548
Schlager, Wolfgang 6365
Schlesinger, M.E. 5589, 6143
Schlosser, Peter 3859, 3869
Schluessel, Peter 5019
Schlüter, M. 4101
Schmitz, W.J. Jr. 5660
Schmitz, Wilfried 5294
Schmoll, H.R. 5880
Schnack-Schiel, S.B. 6045
Schneeberger, Jon 3830
Schneider, D.C. 5495
Schneider, F.I. 4254
Schneider, Gerald 3724
Schneider, S.H. 4991, 5008, 6245
Schock, S.G. 3552
Schofield, Oscar 4229
Scholl, D.W. 5421
Scholten, Jan 5244
Schönwiese, C.-D. 4562
Schoonmaker, J.S. 6223
Schott, Friedrich 4391
Schotte, Marilyn 5551
Schrader, Hans 5863, 5892
Schreiber, R. 6341
Schubert, G. 4166
Schubert, Gerald 3663, 3926
Schudlich, R.R. 5032
Schulson, E.M. 3344, 3358, 3909
Schultheiss, P.M. 3375
Schultz, Adam 4524
Schultz, P.H. 3680
Schulz-Baldes, M. 4958
Schulz-Bull, D.E. 4050
Schumacher, J.D. 6185
Schumann, E.H. 4992, 5061
Schwarcz, H.P. 4052
Schwartz, S.Y. 3670
Schwarz, E. 6254
Schwerdtfeger, Peter 4581
Schwing, F.B. 3435, 5661, 5662
SCOR, i 4981
Scuderi, L.A. 3423
Seaman, N.L. 4609
Sear, C.B. 5090
Searl, M.F. 6126
Sears, D.W.G. 4812, 6146
Segall, M.P. 4669
Segawa, Jiro 4511
Segovia Zavala, J.A. 3695
Seguin, B. 5123
Seidov, D.G. 5046
Seiki, Tohru 6288
Sejrup, H. 3679
Sejrup, H.P. 3605
Sekikawa, Toshio 4612
Selina, M.S. 4230
Selivanov, A.O. 5340
Semenov, I.KH. 4717
Semenova, T.N. 6454
Semiletov, I.P. 4113
Sempéré, J.-C. 3621
Semtner, A.J. Jr. 5033
Seneca, E.D. 4071
Şengör, A.M.C. 3635, 3646
Sept, V.V. 3868, 4397, 4694
Serebryanyy, A.N. 4472, 4473
Seriff, A.J. 3529
Serra-Kiel, Josep 5350
Serret, Pablo 6457
Serreze, M.C. 4580, 6220
Service, S.K. 4896, 5514
Setälä, Outi 6463
Setti, Massimo 6344
Sevcik, C. 3725
Sexton, D.J. 5265
Shabani, M.B. 6277
Shackleton, L.Y. 4972
Shackleton, N.J. 6052
Shamov, V.S. 4468
Shang, E.C. 3383
Shanks, W.C. III 5878
Shao, Yaping 4581
Shapiro, G.I. 3879
Shapiro, L.J. 3984
Shapiro, M.A. 3444
Shaposhnikov, G.L. 3743
Sharma, Rahul 5302
Sharma, S.K. 5933
Sharma, V.K. 4004
Shashkov, N.L. 4686
Shatkay, Michal 5727
Shaw, G.E. 3456, 3458
Shaw, John 4127, 4721, 5844
Shcherbakova, Ye.N. 3396
Shea, D.J. 3424
Sheaffer, J.D. 4586
Shearer, P.M. 5957
Shearer, Peter 5629
Shelkovnikov, N.K. 6230
Shemdin, O.H. 3316, 4334
Shemenda, A.I. 4740
Shemesh, A. 6366
Shemshura, V.Ye. 4231, 4486
Shen, H.H. 3359
Shen, Jie 6090
Shen, S.S. 4457
Shennan, I. 4441
Sheppard, Charles 4993
Sheridan, P.R. 5518
Sheridan, R.E. 5420
Sherman, Jeff 6091
Sherr, B.F. 4862
Sherr, E.B. 4862
Sherwood, C.R. 4660
Sherwood, G. 5357
Sherwood, Graham 4721
Sheu, R.-S. 4602
Shevchenko, V.I. 4582
Shi, Maochong 5674
Shi, Zhong 5303
Shibuya, Kazuo 6221
Shifrin, K.S. 3366
Shillington, F.A. 3303
Shilovskiy, P.P. 4489
Shimamura, Hideki 4811
Shimizu, Hiroshi 5935
Shimmield, G.B. 4100

Shin, H.-R. 4430, 6192
Shiotani, Masato 5771
Shipley, T.H. 5247
Shirayama, Yoshihisa 6479
Shirlal, K.G. 4448
Shirodkar, P.V. 6132
Shlyakhter, A.I. 5132
Shmerlin, B.Ya. 4608
Sholto-Douglas, A.D. 4189
Shor, A.N. 5377, 5427
Shoshany, Maxim 4075
Showell, M.A. 4637
Shrader-Frechette, K.S. 4823
Shrira, V.I. 5116
Shu, Gao 6334
Shuchman, R.A. 5017
Shukolyukov, Yu.A. 3649
Shum, K.T. 3541
Shupak, Avi 3819
Shvarts, K.G. 6158
Sibuet, J.-C. 5958
Sichler, B. 4122
Side, J. 3836
Siedler, Gerold 3284, 5672
Sieg, J. 4297
Siegel, V. 5999
Siegenthaler, Ulrich 4626, 6357
Siegmann, W.L. 4517
Siegrist, H.G. Jr. 4662
Sieracki, M.E. 5497
Siferd, T.D. 4863
Sigmundsson, Freysteinn 6386
Signell, R.P. 6194
Signorini, S.R. 3962, 5675
Sigoillot, J.-C. 4908
Sikander, A.H. 5436
Simard, Yvan 4816
Simarski, L.T. 4376
Simeoni, Umberto 6337
Simmer, Clemens 3427
Simmonds, Ian 3323, 3963
Simoneit, B.R.T. 6351
Simpson, C.J. 4277
Simpson, D.J. 3722
Simpson, R. 5448
Simpson, R.D. 4959
Simpson, R.L. 4086, 6330
Singer, B.S. 5400, 5401, 5402
Singh, J.G. 6081
Singleton, F.L. 3759
Sinton, J.M. 3647, 5397
Siqueiros Beltrones, D.A. 3705
Sissenwine, M.P. 4980
Sissom, S.L. 5543
Sivukha, N.M. 4065, 6369
Sjöberg, Björn 4398
Sjoerdsma, P.G. 6055
Skei, Jens 5210
Skerratt, J.H. 5531
Skibowski, A. 5999
Skop, R.A. 3314
Skornyakova, N.S. 4176, 5443
Skrabal, S.A. 4622
Skwarzec, Bogdan 4323
Slade, T.D. 3345
Slagstad, Dag 4227
Sleath, J.F.A. 3391, 5271
Sleep, N.H. 5936
Slemr, F. 3459
Slepyshev, A.A. 4468
Slingo, J.M. 4600
Sloan, D. 3590
Sloan, L.C. 5893
Slowey, N.C. 3606
Slutter, S. 5983
Small, Christopher 4722
Smart, Peter 3559
Smetacek, Victor 4864
Smirnov, A.V. 4465
Smith, A.L. 3596
Smith, Catherine 6235, 6240
Smith, D.G. 6335
Smith, D.G.W. 4655
Smith, D.K. 4754
Smith, E.A. 5760
Smith, G.B. 4519
Smith, H.D. 3836, 3837
Smith, J.A. 5016, 5034
Smith, J.N. 3517
Smith, Judy 4493
Smith, K.B. 5101, 5102
Smith, K.L. Jr. 5500
Smith, L.T. 5732
Smith, N.D. 6333
Smith, N.R. 3265
Smith, R.C. 4632, 4865, 5772
Smith, S.D.A. 4959
Smith, W.O. Jr. 4020, 5486
Smylie, D.E. 4790
Snelling, Ron 5870
Snieder, Roel 6427
Sniezek, J.H. 4303
Snyder, A.G. 4172
Sobey, R.J. 4458, 6207
Sodhi, D.S. 3360
Soejima, Takamichi 4387
Soffel, H.C. 5366
Sokov, A.V. 4407
Solomon, S.C. 4769, 5959
Soloviev, S.L. 4771
Solov'yev, A.V. 4686
Solov'yev, S.L. 3878, 4168, 4412, 4459, 4772, 4813
Solov'yev, Yu.P. 3897
Søndergaard, Morten 4866, 5985
Song, Jiaxi 6251
Song, Wanxian 5686
Soper, Paul 6145
Sorlien, C.C. 4783
Sornette, Didier 5922
Sorokin, N.D. 4806
Sorokin, Yu.I. 4939, 5515
Sousa, W.P. 4190
Southam, John 4664
Sowers, Todd 4700
Spaargaren, D.H. 6305
Spall, M.A. 5121, 5676
Sparrow, M.A. 5890
Speakman, J.R. 4878
Spear, L.B. 5519
Speed, R.C. 5385
Speer, K.G. 3870
Speer, Kevin 3891
Spell, C.A. 6211
Spelman, M.J. 4575
Spence, G.D. 5858
Spencer, D.W. 4634
Spero, H.J. 4709
Spicer, J.I. 4960
Splettstoesser, John 4377
Sprague, A.L. 3848
Sprague, E.K. 4082
Spriinger, S.R. 5040
Springer-Young, M. 6522
Sprintall, Janet 5646
Squire, V.A. 3332, 3361
Sridhar, K.R. 6037
Sridharan, A. 5864
Srinivasan, A. 6000
Sritharan, S.S. 3406, 3407
Srivastava, S.P. 3628
Srokosz, M.A. 3310
St. John, M.A. 4998
Staff 3806, 5595
Stahl, D.A. 4909
Stalcup, B.W. 5108
Stampfli, G. 3636
Stampfli, Gérard 3580
Standora, E.A. 5007
Stanhill, G. 5133
Stanic, S. 5103
Stanley, D.J. 4076
Stanley, P.E. 5596
Stanton, R.C. 3274
Stanton, T.K. 3726, 5463
Stanulonis, S.F. 3532
Starostenko, V.I. 4795
Starr, Chauncey 6126
Stavn, R.H. 4487
Stearns, D.E. 6044
Stech, J.L. 6252
Steele, J.H. 4182
Stefánsson, Unnsteinn 5809
Steffen, Konrad 3362
Stegmann, P.M. 3727
Stein, C.A. 5370
Stein, M. 3607, 5590
Stein, Seth 5386
Stein, U. 4603
Steinhart, Hans 6077
Steinhorn, Ilana 3397
Steneck, R.S. 6020
Stepanova, T.V. 4684
Stephens, J.A. 5266
Stephenson, F.E. 5705
Stergiopoulos, Stergios 3384, 3385
Stern, M.E. 3398
Stern, M.K. 4021
Stern, S.A. 3848
Stern, T.A. 4097
Sternberg, R.W. 5250
Stevens, R.L. 3542, 3560
Stevenson, C.L. 3472
Stevenson, D.J. 4744
Stewart, C. 5579
Stewart, J.E. 3817
Steyn-Ross, D.A. 5127
Steyn-Ross, M.L. 5127
Stigebrandt, Anders 4398, 6103
Stille, Peter 5341
Stinson, D.W. 4902
Stips, Adolf 5726
Stive, M.J.F. 5251
Stixrude, Lars 5951
Stocker, T.F. 3285, 3290, 4563
Stockton, P.L. 3301
Stoddart, D.R. 5451
Stoelinga, M.T. 5766
Stoffa, P.L. 4791
Stoffelen, A.C.M. 3464
Stoffers, Peter 5293, 5312, 5396
Stöffler, Dieter 3656
Stolarski, Richard 5166
Stommel, H.M. 3864, 4393
Stone, G.W. 5845
Stone, P.H. 5009
Stone, Richard 4378
Storey, B.C. 3637
Stössel, Achim 3436
Stouffer, R.J. 4575
Stramma, Lothar 5047
Stramska, Malgorzata 5496
Stramski, Dariusz 3764, 5095
Strass, V.H. 3728
Stride, A.H. 3543
Stringer, W.J. 5613
Strizhov, V.P. 6480
Strom, S.L. 4232
Stronkhorst, J. 6082
Stroobants, N. 4023, 4031
Strub, P.T. 6149
Sættem, J. 5304
Stuart, Finlay 6352
Stuart, V. 6047
Stüben, D. 5313
Stumpf, R.P. 3369, 4077
Stunzhas, P.A. 4233
Su, Jilan 5050, 5056, 6191
Su, Yusong 5685
Subba Raju, L.V. 5403
Subramanian, B. 5528, 6034
Suetsugu, Daisuke 5424, 5955
Sugimoto, Takashige 4431, 4999
Sugimura, Yukio 5164, 6266
Suginohara, Nobuo 3286
Sugiura, Katsura 5532
Sui, C.-H. 4591
Suiter, H.R. 4520
Sullivan, C.W. 4029, 4937, 5085
Sullivan, E.J. 3385
Sullivan, G.D. 3976
Sullivan, M.J. 6064
Sultan, M. 6434
Sun, Hekun 5583
Sun, Jiashi 5404
Sun, L.C. 5455
Sun, N.H. 4521
Sun, S.-J. 6279
Sun, Wenxin 5079
Sun, Xiangping 5663
Sun, Yanwei 5091
Sunda, W.G. 3991, 6001
Sundaresan, J. 6345
Sundby, Bjørn 5214
Sundermann, J. 4051
Sundquist, E.T. 5228
Sushchevskaya, N.M. 3648
Sushkov, N.G. 3913
Suttle, C.A. 4268
Sutyrin, G.G. 4390, 5733
Suzuki, Yoshimi 4620
Svansson, Artur 4234
Svendsen, H. 4474
Svendsen, I.A. 5673
Svindland, Torunn 5325
Swanberg, N.R. 4197, 6056
Swart, P.K. 3481
Sweeney, M.J. 4245
Swenson, M.S. 4432
Swift, D.J. 4961
Swinbanks, David 6137
Sy, Alexander 6186
Sykes, L.R. 3653
Sykes, R.I. 4549
Synder, R.A. 4304
Syvitski, J.P.M. 5212
Szaniawska, Anna 5970
Szymczak, R. 3487

Tadros, A.B. 5235
Tajima, Fumiko 5367
Takada, Hideshige 5236
Takagi, K. 4552
Takahashi, Kozo 4867
Takeda, Shigenobu 6523
Takehiro, S.-I. 4460
Takeo, Minoru 5960
Takeuchi, Tomoyoshi 6092
Takeyama, Haruko 3765
Talbot, M.M.B. 5560
Talley, L.D. 5180
Talukdar, K.K. 5243
Tamaki, Kensaku 5914, 6372
Tambiev, S.B. 5314
Tameishi, Hideo 4999
Tampieri, F. 6204
Tanaka, Katsuhisa 4631
Tande, Kurt 6496
Tang, Benyang 4390, 4399
Tang, Shih 5078
Tang, Wenqing 3940
Tang, Yongming 5079
Tanimoto, Toshiro 3669, 6390
Tannehill, J.C. 3935
Tanner, W.F. 4564
Tanoue, Eiichiro 4620, 6297
Tao, W.C. 6397
Tappert, F.D. 5101, 5102
Tarling, D. 4127
Tatsumi, Y. 5405
Tatsumoto, Mitsunobu 3666
Taubes, Gary 5616

Taviani, Marco 4883
Taylor, A.E. 3608
Taylor, A.H. 4868
Taylor, B.G.S. 3673
Taylor, Brian 5427
Taylor, D.I. 5810
Taylor, G.T. 5540
Taylor, N.J. 5780
Taylor, N.K. 5824
Teague, K.G. 4021
Tebo, B.M. 3515
Teitelbaum, H. 3401
Temperville, Andre 4444
ten Haven, H.L. 5851
Teplinskaya, N.G. 4235
Terazaki, Makoto 4916
Terray, E.A. 5018
Terzić, S. 5533
Tessier, André 4000
Tett, P. 3729
Tezduyar, T.E. 3936
Thacker, W.C. 5036
Thackeray, J.F. 5342
Theede, Hans 5970
Theodorou, A.J. 3299
Therriault, J.-C. 3691
Thiébaut, Eric 5541
Thiede, J. 3679
Thiede, Jörn 3565
Thomas, A.C. 6002
Thomas, Ellen 4548
Thomas, J.D. 3771, 3786, 3787, 3788, 4287
Thompson, A.M. 5773
Thompson, D.R. 5580
Thompson, J.D. 3867, 5640, 5660
Thompson, K.F.M. 3674
Thomsen, H.A. 5976, 6069
Thomson, D.J. 5096
Thomson, R.E. 3569
Thorburn, M.A. 4388
Thorndike, A.S. 6222
Thornton, D.C. 5792
Thornton, E.B. 3916
Thoroddsen, S.T. 4535
Thorpe, S.A. 3892, 4536, 5114, 5115, 5603
Thual, Olivier 5122
Thunell, R.C. 5274
Thurber, C.H. 4775
Thurmond, J.M. 5525
Thwaites, R. 3341
Thy, P. 6403
Tibbles, B.J. 6489
Tibor, Gideon 5865
Tichelaar, B.W. 6435
Tien, Georgia 5789
Tilbrook, B. 5226
Timonin, A.G. 6464
Tindale, N.W. 5218
Tindall, D.R. 5547
Ting, F.C.K. 5084
Tinti, Stefano 5706
Tison, J.-L. 3910
Tkalin, A.V. 6312
Tlig, S. 4687
Toba, Yoshiaki 3309, 3901
Tobias, C.R. 4253
Toda, Tatsuki 5552
Toft, P.B. 5368
Toggweiler, J.R. 5194, 5630
Tokuyama, Hidekazu 5431
Toledo Machado, L.A. 4592
Tolman, H.L. 6208
Tolomio, C. 3730
Tolosa, I. 4652
Tolstoy, A. 4522
Tolstykh, M.A. 4572
Tom, B.A. 5285
Tomascik, Tomas 3749
Tomczak, Matthias 3300, 5646
Tomita, Tomohiko 3964
Tomosada, Akira 4418
Tonn, Wolfgang 3328
Toomey, D.R. 5959
Toorman, E.A. 3561
Top, Zafer 3269, 3482
Topliss, B.J. 6151
Topping, G. 3477
Toresen, Reidar 5097
Torgunova, N.I. 4034
Torné, M. 6436
Toro, E.F. 4550
Toscano, M.A. 5894
Toulemont, d'Anne 3687
Townsend, D.W. 4869
Toyoda, Kazuhiro 6346
Trainer, V.L. 3684
Tralli, D.M. 5367
Tran, H.V. 3532
Tregenza, N.J.C. 5501
Tréguer, P. 4224, 4236
Tréguer, Paul 3893
Trèguer, Paul 5487
Treguier, A.M. 3287
Tremolada, P. 5831
Tribble, J.S. 5866
Trincardi, Fabio 5867
Trites, A.W. 3737
Trivett, D.A. 5934
Troelstra, S.R. 5343
Trubitsyn, V.I. 4792
Trump, C.L. 3923, 5708
Tsai, P.T.H. 6157
Tseng, R.-S. 3902, 5148, 5623
Tsimplis, M.N. 5149
Tsironidis, Jannis 4128
Tsuboi, S. 4793
Tsuda, Atsushi 4870
Tsuda, R.T. 4309
Tsui, T.L. 3461
Tsukamoto, Katsumi 5502
Tsukawaki, Shinji 4656
Tsunogai, Shizuo 3894, 4635
Tu, Kan 6404
Tucholke, B.E. 4087
Tucker, W.B. III 3363
Turekian, K.K. 3491
Turley, C.M. 5534
Turner, Grenville 6352
Turner, J. 3814, 4598
Turner, J.T. 6003
Turner, P.J. 5592
Turrell, W.R. 4419, 5035
Tushina, I.G. 3997
Tushingham, A.M. 4701
Tuzhilkin, V.S. 6228
Tverberg, V. 4474
Tyapkin, V.S. 4939
Tyce, R.C. 5243
Tyler, Seth 4278
Tyson, P.D. 5142
Tziperman, Eli 3891, 5036

Uchida, Hiroyuki 3973
Uchupi, Elazar 4741
Udías, Agustín 3667, 4134, 4167
Uenzelmann-Neben, Gabriele 3629, 6387
Ullman, W.J. 4622
Ulloa, Osvaldo 6490
Unanue, Marian 4910
Underwood, A.J. 3741
UNEP 4981
UNESCO 4981
Unnikrishnan, A.S. 5037, 6160, 6173
Upstill-Goddard, R.C. 3473
Uras, S. 3620
Urban, Heinz 3384
Uruski, Chris 4173
Uspenskaya, T.Y. 4176
Ustach, J.F. 6502
Usup, Gires 4871

Vachon, P.W. 3297
Vai, G.B. 3609
Vakhterov, G.P. 4804
Valente, R.M. 6121
Valentine, H.R. 5048
Valet, J.-P. 4723
Valette-Silver, Nathalie 5857
Vallot, H. 6086
Valsangkar, A.B. 5444
Van Alstyne, K.L. 5542
Van Atta, C.W. 4535
Van Baalen, Chase 4906, 4907
van Ballegooyen, R.C. 5048
Van Bennekom, A.J. 4006
Van Bennekom A.J. 4236
van Boekel, W.H.M. 4204
Vandal, G.M. 5784
van de Graaff, J. 4078
van de Graaff, Jan 4345
van den Berg, A.P. 3638
van den Berg, C.M.G. 3474
van den Beukel, Jilles 5432
van der Beek, P.A. 6388
Vanderhaeghen, R. 4324
van der Meer, J. 4002
van der Spoel, S. 4191
van der Valk, L. 5251
van der Weijden, C.H. 6281
van der Zwaan, G.J. 5968, 6055
van Dijk, R.P. 4442
Van Dolah, R.F. 5516
van Duin, C.A. 4466
van Eijden, A.J.M. 5883
van Franeker, J.A. 5974
van Gemerden, Hans 3992, 5536
Van Grieken, R.E. 5169
Van Grieken, René 5170
Van Guzel, Peter 6347
van Gysen, Herman 3855
van Harten, Dick 6500
van Heijst, G.J.F. 3387
Van Iperen, J.M. 3591
van Keken, P.E. 3638
Vanko, D.A. 4104
van Leussen, Wim 3544
van Loon, H. 5173
Van Malderen, Hans 5170
van Overeem, J. 4078
van Overeem, Jan 4345
van Raaphorst, Wim 6291
Van Vleet, E.S. 5524
van Weering, Tj.C.E. 3562
van Wees, J.D. 6437
Van'yan, L.L. 4489
Van'Yan, L.L. 4724, 4725
Varela, Manuel 6004
Varis, Olli 3731
Varkey, M.J. 5080, 6209
Varma, K.K. 5146, 6248
Vasconsellos, M.B.V. 5168
Vasilenko, V.M. 4467
Vasil'ev, N.A. 4523
Vasil'kov, A.P. 4488
Vasseur, G. 3622
Vaulot, Daniel 6465
Vavilova, V.V. 6466
Vdović, Neda 4032
Vecchione, Michael 4245
Vegas, R. 6389
Velasquez, Z.R. 4237
Velden, C.S. 4616
Velimirov, Branko 5535
Vella, A.J. 5198
Vénec-Peyré, M.-T. 5344, 5558
Veniale, Fernando 6344
Venrick, E.L. 6005
Vera, E.E. 4777
Verba, M.L. 4794
Verboom, G.K. 4442
Verevochkin, Yu.G. 4582
Verhoef, J. 6374
Verkhovskiy, A.B. 3649
Verlaan, P.A. 6524
Vermeij, G.J. 4824
Vernette, G. 5433
Veron, J.E.N. 6493
Veronis, George 6129
Verron, Jacques 5664
Vershinin, Andrey 5820
Verstraete, J.-M. 5055
Verwoerd, W.J. 4743
Vested, H.J. 3465
Veth, Cornelis 3911
Veum, Terje 5054
Vianna, M.L. 5665, 5746
Vidal, F.V. 3883
Vidal, V.M.V. 3883
Vidale, J.E. 3668, 5434
Vijayakumar, R. 6019, 6027
Viles, C.L. 5497
Villafañe, Virginia 5476
Villanoy, C.L. 3300
Villanueva, Roger 6467
Villareal, Tracy 4312
Vincent, D.G. 3448
Vinogradov, G.M. 6501
Vinogradova, K.G. 3873, 4433
Viode, J.-P. 6419
Virieux, Jean 5922
Visscher, P.T. 3992, 5536
Visser, A.W. 5038
Vitali, G. 6204
Vitanage, P.W. 5391
Vitsas, A. 3411
Vivequin, S.M. 4197
Vogt, P.R. 5950
Völker, Christoph 4593
Volkov, I.I. 6278
Vol'nev, V.M. 4067
Volovov, V.I. 4496
Von Damm, K.L. 3570
von Daniels, C.H. 5345
von Rad, Ulrich 4736, 5245, 5305, 5316, 5406
von Stackelberg, Ulrich 5244, 5245, 5315, 5316
Voropayev, S.I. 3849
Vorren, T.O. 3594, 3601, 3679
Vosjan, J.H. 5537
Voss, K.J. 6223
Vounatsou, P. 6114
Vranken, G. 4324
Vugts, H.F. 6258
Vyskočil 5413

Wadhams, P. 5090
Wadhams, Peter 5092
Wagoner, B.B. 4238
Wahle, R.A. 6020
Wai, M.M.-K. 6259
Waide, R.B. 4192
Waite, T.D. 3487
Wajsowicz, R.C. 4551
Wakabayashi, John 5346
Wakatsuchi, Masaaki 6174
Wakeham, S.G. 3505
Wakim, G. 5694
Walenta-Simon, Martha 5535
Walker, D.A. 5378, 6438

Walker, D.I. 4310, 4366
Walker, D.J. 4079
Walker, D.R. 3732
Walker, J.C.G. 4691
Walker, L.R. 4192
Wallace, D.W.R. 5150
Wallace, J.M. 5647, 6235, 6240
Wallerstein, George 6233
Wallmach, T. 3664
Wallrabe-Adams, H.-J. 3551
Walsh, J. 6510
Walsh, J.E. 3947
Walsh, J.J. 5472
Walsh, P.M. 5580
Walt, D.R. 6285
Walter, M.R. 5332
Walter, Peter 5306
Walters, R.A. 3288, 5057
Walther, Ralf 4061
Walton, T.L. Jr. 4461
Wan, Zhengming 5772
Wang, Bin 5151
Wang, D.P. 4475
Wang, Fajun 6122
Wang, Huaxiao 3948
Wang, Kelin 5739
Wang, Wenzhi 5869
Wang, Y.Y. 3383
Wang, Yuanpei 5663
Wang, Zhaozheng 5761
Wang, Zongshan 5643
Wangersky, P.J. 4183
Wanninkhof, Rik 5749
Ward, M.N. 5152
Ward, S.N. 5961
Ward. B.B. 5801
Wardlaw, B.R. 4663
Ware, Colin 3533
Warn-Varnas, Alex 3364
Warren, C.R. 3352
Wartel, M. 4007, 5206
Wartel, Stanislas 3563, 3564
Wash, C.H. 4610
Wassermann, J.C. 6063
Watanabe, Kentaro 4228
Watanabe, Masataka 3682
Watanabe, Shuichi 3894
Watanabe, Y.W. 3894
Watermann, B. 5581
Waters, Tom 3846
Watkins, R.T. 5931
Watling, Les 3789, 4255
Watson, A.J. 4868
Watson, Andrew 5498
Watson, G. 6215
Watson, William 5455
Watson-Craik, I.A. 6112
Watters, T.R. 6444
Watts, C.D. 4651
Watts, D.R. 5668
Wear, R.G. 4940
Weaver, A.J. 3286, 6166, 6171
Webb, J.W. 6083
Webb, S.C. 4524
Weber, L.J. 3351
Weber, R.E. 4960
Weeks, Robin 5001
Wefelmeier, C. 5093
Wefer, G. 5454
Wefer, Gerold 4239
Wei, C.-L. 3493, 6279, 6298
Wei, J.S. 3962
Wei, Y. 3326
Wei, Yi 5081
Weidemann, A.D. 4487
Weigelt, Michael 5582
Weimer, Paul 4679, 5868
Weinstein, S.A. 6394
Weis, Peddrick 4325
Weiskel, P.K. 6123
Weiss, R.F. 4395
Weissel, J.K. 3655
Weissenberger, Jürgen 5720
Welch, H.E. 4313
Weldon, R.J. II 5956
Wells, David 3533
Wells, F.E. 4187
Wells, J. 6009
Wells, J.T. 4033, 5267
Wells, M.J. 6009
Wells, M.L. 5222
Welschmeyer, Nicholas 5499
Wen, Y.-H. 6323
Wendt, P.H 5516
Wenju, Cai 3302, 4434
Wenner, Adrian 4927
Wentz, F.J. 3940
Werz, B.E.J.S. 5634
Wesnousky, S.G. 5426
West, G.F. 6317
West, J.C. 4462
Westall, F. 5839
Westerlund, S. 5178
Westerlund, Stig 3996
Wettlaufer, J.S. 6218
Wharton, R.A. Jr. 4565
Wheatcroft, R.A. 6021
Wheeler, P.A. 4932
Whitehead, M.D. 6026
Whitehouse, M.J. 4222
Whitlatch, R.B. 4260
Whitman, J.M. 5347
Whitmarsh, R.B. 4787
Whitmore, N.D. Jr. 4653
Whittington, R.J. 4478
Whittow, G.C. 4903
Wick, G.A. 5019
Wicksten, M.K. 3790
Widder, E.A. 4817
Widmark, J.G.V. 5355
Wiebe, P.H. 4857, 4872, 4968, 5463
Wiedicke, Michael 5348
Wiesner, M.G. 3954
Wigley, T.M.L. 4041, 5740
Wignall, Paul 5010
Wijffels, S.E. 4400
Wikner, J. 4240
Wiktor, Józef 5993
Wildi, Walter 3580
Wilhelms, D.E. 5632
Wilkens, R.H. 6348
Wilkerson, F.P. 3733, 5200
Willems, R.C. 5656
William, S.N. 5407
Williams, D.F. 4709
Williams, G.A. 6022
Williams, K.L. 4508
Williams, P.M. 3490, 6299
Williams, Quentin 3668
Williams, R.G. 3289
Williams, R.S. Jr. 3830
Williams, T.M. 6010
Willmott, A.J. 4401
Willoughby, H.E. 5762
Wilmott, C.J. 3425
Wilson, C.D. 6152
Wilson, D.S. 6379
Wilson, J.C. 3341
Wilson, K.M. 4735
Wilson, W.H. Jr. 4256, 4257
Wimpee, B.B. 3761
Winefordner, J.D. 3472
Winn, Kyaw 5348
Winterer, E.L. 3610, 3678
Winters, G.V. 5212
Winters, K.B. 3321
Wirick, C.D. 5150
Wirsen, C.O. 3757
Wirth, Harry 6108
Wise, S.W. 4738
Wishner, K.F. 4837, 4890
Wisniewski, Joe 6306
Witman, J.D. 4247
Witte, H.J. 4848
Wittenberg, M. 4258
Wolanski, E. 5025
Wolanski, Eric 4088
Wold, C.N. 4735
Wolf, G.W. 5601
Wolf, T.C.W. 3565
Wolff, Torben 4360
Wolgast, D.M. 5521
Wong, C.S. 5226
Wong, G.T.F. 5825
Wong, H.K. 4133
Wood, A.M. 4213
Wood, Ray 4173
Wood, V.T. 4617
Woodcock, F. 6261
Woodhead, D. 3800
Woodin, S.A. 4259
Woodruff, Fay 4702
Woodward, F.I. 6521, 6525
Woodworth, P.L. 4441
Wooldridge, T.H. 4982
Woolf, D.K. 5115
Wooller, R.D. 4263, 6028
Wooster, W.S. 4361, 5598
Worby, A.P. 3437
Wormuth,J.H. 6039
Worthington, D.G. 4262
Wrench, J.J. 4043
Wright, D.G. 3285, 3290, 4401, 4546, 6234
Wright, I.C. 5408
Wright, J.A. 5065
Wright, L.D. 4336
Wright, S.W. 3475
Wright, T.L. 5409
Wright, V.P. 4670
Wrolstad, K.H. 4172
Wu, Baoling 5583
Wu, C.-K. 6177
Wu, Guoxiong 5767
Wu, Jin 3317, 3902, 3965, 4583, 5078, 5081, 5780
Wu, Lianxing 5671
Wu, Naihua 6198
Wu, Schuman 3632
Wu, Xingren 3323
Wu, Z.-X. 4578
Wulff, Fredrik 6128
Wunsch, C. 6238
Wurjanto, Andojo 6202
Wyrwoll, K.-H. 4108
Wyss, M. 5948
Wyss, Max 6439

Xie, Yunbo 4525
Xu, Bingrong 5750
Xu, Bochang 5643
Xu, Delun 5082
Xu, Duanrong 6191
Xu, Hongda 5663
Xu, J.-S. 5156
Xu, Naihuai 5711
Xu, Qin 4420
Xu, Xianjun 5735

Yagüe, Carlos 3408
Yakovlev, V.A. 4638
Yakushkin, I.G. 4383
Yamada, Toshio 4273
Yamagata, Toshio 3958
Yamagishi, Hiromitsu 3650
Yamaji, Atsushi 5962
Yamazaki, Hidekatsu 5474
Yamazaki, Koji 6275
Yan, Lusheng 3516
Yan, X.-H. 3858
Yanagi, Tetsuo 6193
Yang, Bai 6253
Yang, C. 5159
Yang, C.C. 5104
Yang, D.-B. 5464
Yang, Dasheng 6253
Yang, Guohua 6328
Yang, H.-S. 5687, 5688
Yang, Jiayan 5707
Yapp, C.J. 3611
Yarbrough, M.A. 5457
Yaremchuk, M.I. 3921
Yasuda, Ichiro 4421
Ye, Song 4978
Ye, Yuguang 5895
Yeats, P.A. 4042
Yee Fong, J.M. 4555
Yefimov, V.V. 4463
Yegorova, T.I. 4795
Yel'nikov, I.N. 4168, 6440
Yermakov, S.A. 4476, 4584
Yeske, L.A. 5656
Yi, H.C. 4241
Yi, Jiansheng 6023
Yoo, D.G. 4697
Yoon, W.B. 3746
York, L.L. 5894
Yoshida, Jiro 4384, 4430
Yoshida, Masaru 5391
Yoshida, Mitsuru 6441
Yoshida, Yasuhiro 4456, 4796, 5963
Yoshikawa, Kazuo 3677
Yoshizaki, Masanori 3971
Young, C.M. 5506
Young, D.F. 3416
Young, G.M. 3612
Young, G.S. 3439, 5160, 6256
Young, J.R. 3797, 5356
Young, R.W. 4703
Yu, H.-P. 5545
Yu, H.-S. 6323
Yu, Honghua 6188
Yu, Jian 4332
Yu, Liming 4726
Yu, Lisan 5707
Yu, Zuojun 5028
Yuan, Qike 5663
Yuan, Yaochu 5677
Yuan, Yeli 6210
Yuen, C.W. 4402
Yuen, D.A. 3638, 5117
Yuen, M.A. 5457
Yunev, O.A. 4242
Yurgina, Ye.K. 3649

Zaback, D.A. 4671
Zabala, M. 6499
Zachariasse, W.J. 5968
Zahn, Rainer 3613, 5631
Zaitlin, B.A. 6335
Zaizen, Yuji 6270
Zajac, R.N. 4260
Zakharia, M.E. 3372
Zaslavskiy, M.M. 3897
Zaytsev, S.I. 4566
Zebiak, S.E. 5130
Zebib, Abdelfattah 3663
Zecca, A. 6246
Zenchenko, S.A. 4967
Zenetos, Argyro 4897
Zeng, Jianjun 4422
Zeng, Xianzhang 5176
Zen'kovich, D.A. 3307
Zerefos, C.S. 6237

Zhabina, N.N. 6278
Zhan, Wenhuan 5917
Zhang, Deyu 5393
Zhang, F.-S. 4420
Zhang, Huaishui 5153
Zhang, Hunan 6331
Zhang, Jinlun 3365
Zhang, Jun 6211
Zhang, Lingsu 5825
Zhang, Ni 5781
Zhang, Qingrong 5761
Zhang, Sheng 5666
Zhang, Shuo 4016
Zhang, Y.-S. 3669, 6390
Zhang, Zhi 3670
Zhang, Zunguo 6093
Zhao, Hongmei 6331
Zhao, Z.G. 3327
Zharinov, D.A. 4496
Zhevandrov, Peter 3318
Zhikharev, G.M. 4423
Zhikharve, G.M. 3937
Zhmur, V.V. 3938
Zhong, Jianqiang 5917
Zhou, C.P. 6212
Zhou, Di 5869
Zhou, Jizhong 4193
Zhou, Mingyu 5782
Zhou, Zenghao 5790, 5793
Zhou, Zongcheng 5584
Zhu, H. 3453
Zhuang, Dongfa 6509
Zhuang, Guoshun 3989
Zhuravlev, D.Z. 4788
Zhurbas, V.M. 4537
Zhurenkov, A.G. 4638
Zielinski, G.A. 5891
Zieman, J.C. 6024
Zimmerman, D.L. 4329
Zimmerman, J.T.F. 5062
Zimmermann, Alfons 6050
Zitman, T.J. 3409
Zlobin, S.K. 3651
Zlotnicki, Jacques 5410
Zlotnicki, V. 3276
Zoback, M.D. 5411, 5447
Zolotukhina, Ye.Yu. 4933
Zong, Yongqiang 4080
Zore-Armanda, M. 6155
Zou, Emei 5643
Zwolsman, J.J.G. 6281

Subject Index
(Notes)

General principles. A small number of very specific access terms (with accompanying non-searchable modifiers) is assigned to each document. The terms, drawn from the title or text, are rotated to generate the index entries.

A major emphasis is on proper geographic or physiographic names (e.g., Antarctic Bottom Water, Nares Abyssal Plain, Tyrrhenian Sea). Nearshore studies peculiar to one region might only be accessible under a country or continent name, although the name would then carry modifiers for more complete geographic and topical information. Additional spatial, zonal or environmental locators are frequently assigned to a document. Examples might include the terms mixed layer, troposphere, estuaries, fracture zones, and terms beginning with bottom-, surface-, or littoral-.

Another emphasis, when practicable, is on access terms that represent concrete, tangible or directly perceivable entities. Thus, phytoplankton might be assigned in preference to primary production, or seawater in preference to transparency, or sediments in preference to grain size. The less concrete words are freely used as modifiers, and they will frequently occur in the index as gathering points, or nodes, for cross-references to more specific terms, but generally will not collect many documents themselves, unless they are central to the paper's topic. In general, all processes (e.g., diagenesis), measured or calculated quantities (e.g., production), concepts (e.g., Evolution) and other abstractions are used as access terms only when they are the subject of a universal discussion rather than subsidiary to regional or other more concrete considerations.

A few non-English terms (Massif Central, gelbstoff) will occur in the index if thought to be appropriate.

Hierarchies. Only limited hierarchies have been constructed. Thus, a document on the Tyrrhenian Sea is not necessarily accessible under the Mediterranean Sea, nor a document concerned with the Tertiary period accessible under Cenozoic. But oceanic features (including bottom features) are built up to at least the name of a specific sea or gulf. Shallow water areas are built up through a terrestrial hierarchy to the name of a country (for the U.S. and Canada to the name of a state or province), or occasionally to the name of a major nearshore water body such as Mid-Atlantic Bight or Chesapeake Bay. Islands are built up to the name of an island group or the name of the surrounding water body in the case of isolated islands. Geological periods and markers are built up to at least the name of an epoch, but events as old as the Precambrian are always accessible under that term. Specific cases are sometimes made accessible as general cases; for example, a document on the Kuroshio would also be generically accessible under the term currents provided that, for the paper in question, the Kuroshio was used to exemplify a more universal aspect of currents. Certain hierarchies, particularly taxonomic, may occur coincidentally because they are part of an original title; otherwise an attempt is made to build up the taxon in a title by one or two levels.

Cross-references. There is a cross-reference structure for many of the general terms. Cross-references that follow the phrase "see also" tend to be narrower terms, synonyms or near-synonyms. Cross-references that follow the phrase "more at" tend to be broader or more distantly related terms. A cross-reference which appears in capital letters contains either another list of cross-references under it, or, a list of documents that might well be highly relevant to the search. This can be so because two-word terms are frequently filed in both normal (specific) and inverted (general) forms. For example, plate tectonics is filed as plate tectonics, to juxtapose it with other plate- terms, and also as tectonics: plate, to juxtapose it with other tectonics-terms. It is the term tectonics which will have the cross-references to, e.g., neotectonics, seafloor spreading and subduction. Because the cross-references are made somewhat independently of the documents in the collection, a user could occasionally look up a cross-reference to find that the only entry is a reference back to the starting place.

Search strategy. Given the above, the following general rules apply to search strategy: (1) Select concrete or tangible terms insofar as practicable. (2) Build an appropriate set of broader and narrower terms, particularly for proper geographic or physiographic names, geological time periods, taxa and their common name equivalents; for the general terms, a systematic foray through the cross-references at this point is likely to be more useful than is their happenstance utilization after a search has begun. (3) Select both terrestrial and oceanic geographic names for nearshore areas. Finally, the searcher interested in a large set of documents that, regardless of individually specific or general natures, applies to a broad concept like tides or sediments might better search the appropriate headings of the bibliography itself. Suggestions regarding the index will always be appreciated.

SUBJECT INDEX

to Oceanographic Literature Review,
1992, Vol. 39(7-12), pp. 533-1051
citations 92:3263-92:6530

Note that the leading numerals '92' are omitted from the access numbers. Also note, if doing multi-year searches, that through Volume 36 annual cumulative indexes were published. In Volume 37 there are four quarterly non-cumulative indexes to search; from Volume 38 forward, two semiannual non-cumulative indexes are provided.

ablative subduction
tectonics ... 6397
abyssal bacteria
pressure, sensing ... 4266
abyssal basins
Mediterranean Sea, E; crust, seismic soundings ... 6416
abyssal circulation
buoyancy-driven; in circumpolar ocean ... 4401
baroclinic structure ... 5657
abyssal fauna
Mediterranean Sea, and Atlantic species ... 4883
bottom currents, strong ... 4886
studies; North Atlantic; submersibles ... 6470
abyssal hills
morphology; Atlantic Ocean, along flow lines ... 6420
abyssal zone
microbiota; bacteria; Japanese research project; report ... 3842
North Atlantic, E; ichthyofauna, demersal ... 4880
abyssopelagic fauna
North Pacific, central ... 5500
Acanthaster
planci, reproduction, recruitment and hydrodynamics; Great Barrier Reef; Echinodermata; predation, by crown-of-thorns starfish ... 6491
accretionary prisms
Costa Rica, slope; crust, seismic imaging ... 5247
birth; New Zealand, Hikurangi margin; margin tectonics . 5372
Kodiak Formation; tectonics, forearc evolution; strain variations ... 5376
melting in; Alaska: Gulf of; rocks, granitic, generation ... 5939
accretionary terranes
wedging; South America; Caribbean Plate; collision tectonics ... 5385
accretionary wedges
role; continents, growth; plate tectonics ... 3635
permeability, fluid; hydrofracture, conditions for; crust .. 4103
Barbados; sediments, smectite-illite transition ... 5281
Sakhalin, S; crust, oceanic fragments and terrigenous trench fill ... 5288
sediments, porosity, fluid flow ... 6338
sediment failures, and fluid flow, seepage force; vents, focused venting; channels, headless submarine canyons .. 6350
acetate
carbon isotope biogeochemistry; sediments, methanogenic ... 4639
acetylene reduction (More at NITROGEN CYCLE ...)
acoustic<s> (More at SOUND ...)
acoustic backscattering
the parabolic approximation ... 3380
parabolic equation ... 4500
acoustic mapping
seafloor ... 4496
acoustic microscopy (More at MICROSCOPY ...)
acoustic pingers (More at PINGERS ...)
acoustic positioning
system ... 6092
acoustic profilers (More at PROFILERS ...)
acoustic scattering
reflection loss from solid boundaries ... 3376
surface, wind-driven, from ... 4499
by infinite hollow cylindrical shell ... 4512
ray synthesis of leaky Lamb wave contributions ... 4521
scintillation index ... 5104
acoustic surveys (More at SURVEYS ...)
acoustic telemetry (More at TELEMETRY ...)
acoustic tomography
modal; El Niño, monitoring ... 3383
signal processing ... 4522
acoustic waveguides
tomographic imaging ... 4498
perturbation theory ... 4506
acoustic waves (More at WAVES ...)
propagation; time-domain paraxial approximations ... 4517
propagation; on fluid-loaded plate ... 4518
Acoustically Navigated Geological Under-Sea Surveyor (Use ANGUS)
acoustics
frequency content of randomly scattered signals ... 3370
sonar, side-scan and synthetic aperture; processsing requirement and resolution capability comparison ... 3371
measuring attenuation by impedance tube; sediments ... 3373
target tracking; generalized Kalman filter approach ... 3374
passive ranging in multipath environments; known multipath parameters ... 3375
range-averaged intensity model ... 3378
converting bottom loss; sediments ... 3379
matched field processing with a minimum variance beamformer 3381
evaluation of properties by; sediments, soft mud ... 3382
forming a long synthetic aperture at sea ... 3384
signal processing, synthetic aperture; collection ... 3385
generation; sound channels, new type ... 3915
reverberation statistics; seafloor ... 4490
wind waves; sound, transmission in waveguides, influence on 4492
scattering model; surface, roughness ... 4493
horizontal ring arrays ... 4494
imaging; noise, ambient ... 4495
nonlinear; sediments ... 4497
internal waves, as cause; vibrations, seismoacoustic ... 4501
target motion analysis; sound, absorption ... 4502
propagation; sound channels ... 4503
reverberation; energy flux vector field ... 4504
towed array shape estimation ... 4505
sound channels, new type; noise, vector and phase structure . 4507

resonance excitation mechanisms of large aspect ratio targets; impulse excitations and bipolar couplings ... 4508
signal location; asymptotic statistics ... 4509
hydrophone buoys, drifting; for the MOS-1 data collection system ... 4511
bubbles, oscillations, nonlinear damping of ... 4513
HF propagators, multiscale solutions ... 4514
HF seafloor reverberations; sediments, layers, effect ... 4515
multiple-interference rejection ... 4516
shallow-water; matched field processing ... 4519
transmissivity; bubbles, bubbly water ... 4520
near fields, effects on; water column, upper, inhomogeneity and instability ... 4523
sound, transmission air-to-water ... 5096
extinction cross-section; fish, migrating ... 5097
sound, source dependence on wave-breaking variables ... 5098
seawater, boric acid relaxation; sound, absorption ... 5100
chaos, ray ... 5101
chaos, ray ... 5102
seafloor, reverberation ... 5103

acoustics: fisheries
developments; symposium ... 3833

actinides (More at ELEMENTS ...)

active margins
beneath; deep geodynamic processes ... 4778
detailed structure and processes; symposium ... 4811

Aden: Gulf of
Red Sea; zooplankton; community metabolism ... 3724
Red Sea; sedimentation, and evolution ... 5320
Red Sea; sediments, bio- and lithostratigraphy ... 5327
Red Sea; sediments, thermal maturity, source-rock occurrence; hydrocarbons, potential ... 5435
Red Sea; petroleum potential; hydrocarbons, prospects ... 5436
tectonics, framework; hydrocarbons, prospects ... 5437
Red Sea; hydrocarbons; petroleum exploration; methodology of regional cooperation ... 5441
Red Sea; petroleum potential; hydrocarbons; collection ... 5446
Red Sea; Ethiopian Rift; crust, kinematics and deformation; tectonics, since the Oligocene; in French, English abstract ... 6381

adenosine diphosphate (Use ADP)

adenosine monophosphate (Use AMP)

adenosine triphosphatase (Use ATPase)

adenosine triphosphate (Use ATP)

Adriatic Sea
N; wind-driven circulation ... 3279
N; mare sporco, episodes; climatological aspects of occurrence 3428
N; suspended matter, nature, sedimentation; density stratification, during ... 3504
coast; seismicity, seismogenic structures activated 1987 ... 3654
S; zooplankton, meso-, neritic; seasonal variation ... 3719
S; zooplankton, micro-; annual vertical distribution ... 3723
NW; phytoplankton, and hydrology; brackish basins; in French ... 3730
N; particulates, chemical, physical properties ... 4032
Adige River; sedimentation, of riverborne material; shelf seas, shallow ... 5270
N; Foraminifera, benthic; organic matter, flux ... 5897
okadaic acid; mussels, in ... 6072
1971-83; hydrographic surveys ... 6155
Rijeka Bay; hydrocarbons, chlorinated; organochlorines, inflow, levels, fate ... 6311

advection (More at FLUID DYNAMICS ...)
diffusion; averaging method in nearly time-periodic problems ... 4331
diffusion; fluid dynamics; moment conservation method ... 4549

advection-diffusion equation
fluid dynamics; finite difference approximations ... 6234

advective transport
sediment-water interface, beneath ... 3541
fluid dynamics; vorticity, baroclinic singular geostrophic ... 4542

advocacy science
pollution politics ... 6111

Aegean Sea
earthquakes, focal mechanisms ... 4161
Cretan Trough; sediments, seismic data ... 4168
sapropels; sediments ... 4678
area, coupled process; subduction zones; spreading centers 4732
N; macrofauna, soft substrate ... 4889
Cretan basin; basement, acoustic relief structure; sediments ... 6440

aerial photography
signal processing; shorelines, detection ... 4075

aerial survey<s> (More at SURVEYS ...)

aerosol optics
Mauna Loa, at; long-range transport ... 5776

aerosols (See also droplets, drops, dust, fog, spray, volcanic emissions ...)
composition; Black Sea, over; trace elements ... 3454
chemical components; air masses, Alaskan; sea salt ... 3456
chemical components; air masses, Alaskan; aged pollution ... 3458
anthropogenic, by; climate, forcing ... 3942
marine, spectra; bubbles, flux; wind, various velocities ... 3965
optical thickness; Mediterranean Sea, W, over; eolian dust 3987
generation; elements, distribution; flotation, processes, effect 3988
iron, cycle; sulfur, cycle; cyclic links ... 3989
polluted, released from; trace metals, partitioning; coastal zone, seawater ... 4047
Yellow Sea, inputs to; trace elements, and mineral matter ... 4611
sea-salt, effects on; continental air masses ... 4612
North Sea; particulates, mass analysis ... 5167
Antarctic Peninsula; elements, composition ... 5168
Southern Bight; North Sea; particulates, characterization 5169
North Sea; particulates, giant ... 5170
anthropogenic influences; hydrocarbons, PAHs; lead, relationship with ... 5171
Bermuda, and Barbados; trace elements ... 5774
chemistry, transport; China, off ... 5781
radiative corrections; surface temperature; remote sensing, AVHRR ... 6150
submicrometer particles; South Pacific; methanesulfonate, to sulfate molar ratio ... 6267
particles, nucleation; marine boundary layer ... 6269

aerosols: atmospheric
sulfates; combined effects on surface air temperature ... 3985
Pacific, W; seawater; suspended matter ... 5782

aerosols: tropospheric
Pacific, tropical; particles, sea-salt ... 6270

Afar
1989 sequence; earthquakes; tectonics, implications; rift zones ... 6386
Ethiopia; triple junctions; tectonics, evolution ... 3626

Africa
NW corner; Jurassic; sediments; tectonics, evolution ... 3580
East; Red Sea; gravity field ... 4124
West; Lake Nyos; degassing, to prevent catastrophic effervescence; carbon dioxide, dissolved ... 4370
over; Atlantic, over; atmospheric convection, deep ... 4592
S; Lake Mpungwini; sulfur, biogeochemistry ... 4644
East; Rukwa Rift, geology and geophysics; rift zones ... 4696
Etendeka; South America, Parana; volcanism, basaltic; mantle plumes; rifting, mechanics of ... 4747
W; petroleum; report ... 5965

Afro-Arabian Rift
System; crust, thinning; continental rifting; seismic refraction data reviewed ... 4163
system; Red Sea Rift; East African Rift ... 5445

Agarum
fimbriatum, on; Bryozoa, Lichenopora sp.; epiphytes, can herbivore preferences explain distributions? ... 3739

Agrobacterium
5 n.spp., 3 nom.rev.; bacteria, star-shaped-aggregate-forming ... 3763

agronomy (See also AQUACULTURE ...)

Agulhas Current
over; South Africa, S of; weather, transitions ... 3431
model; currents ... 5048
system; currents; rings, shedding ... 6181

Agulhas Retroflection
eddies; flow, time-dependent ... 3276
water masses, modification; convection, by ... 4533

air (See also aerobic, anaerobic, deaeration; more at ATMOSPHERE, LIGHT, SOUND ...)
samples; atmospheric carbon dioxide, and methane; greenhouse gases ... 6263

air currents
atmospheric waves; coastally-trapped; review ... 3970

air flow: turbulent
waves, generation ... 4466

air masses
Alaskan; aerosols, chemical components; sea salt ... 3456
Alaskan; aerosols, chemical components; aged pollution ... 3458

air masses: continental
aerosols, sea-salt, effects on ... 4612

air quality
modelling; sea breezes, and land ... 5754

air temperature (More at TEMPERATURE ...)
aircraft (See also helicopters ...)
airguns
P11E.03; seismology, seismoacoustic investigations 6315
Air-Mass Transformation Experiment (Use AMTEX)
air-sea interactions (See also ocean-atmosphere- and wind-wave interactions; more at ATMOSPHERE, OCEAN ...)
ocean-atmosphere interactions, barocoupling; circulation, general 3949
coupled modes; Pacific, W tropical 3955
Mexico: Gulf of; storms, related to 3957
South Pacific, autumn; carbon dioxide, air-sea disequilibrium 3959
wind stress, alongshore; circulation, in the pycnocline, effects on 4571
fronts, atmospheric and oceanic; atmospheric turbulence . 4574
turbulent energy, dissipation; mixed layer, upper oceanic .. 4577
ocean-atmosphere interactions; temperature, changes, air and sea 4578
circulation, GCMs 5144
energy flux; Bengal: Bay of; atmospheric boundary layer, stability 5146
wind, response to; circulation, GCM 5747
Trieste: Gulf of; evaporation; heat flux 6247
air-sea interface (More at INTERFACES ...)
transfers at; elements, fractionation 3455
gas exchange, rates; breaking waves 4566
patterns; Atlantic, tropical; drought, sub-Saharan, associated with 5140
sea-to-air transfer at; surfactants; bubbles, bursting, by 5148
gas transfer; breaking waves 5150
worldwide fields; wind, surface, data; rainfall, Sahelian, variability 5152
gas exchange; small-scale surface streaming 5723
nitrogen, exchange; phosphorus, exchange 5742
California: Gulf of; heat flux; momentum flux; in Spanish and English 5744
wind, speed; gas exchange 5749
Bengal: Bay of; energy flux; atmospheric boundary layer, stability 6248
Aitken nuclei
atmospheric ions; Southern Ocean, and polar seas, distribution over 6236
Alabama
SE; Florida, NW; sediments, multiple sources; longshore drift 5845
Alaska
Nome; Pliocene, -Pleistocene; sediments, high sea level; aminostratigraphy 3534
coast; atmospheric boundary layer; turbulence, structure 4581
Peninsula region; earthquakes, great, possible precursors 4767
noise, ambient; fjords 5099
N; Pliocene; transgression 5318
Barrow; impact craters, Avak; gas fields, genesis 5331
Katmai, June 1912; volcanic eruptions; geophysical and geochemical observations 5399
Kodiak; Pinnipedia, harbor seals; Phoca, vitulina richardsi; organochlorines; chemicals, toxic 5575
Cook Inlet; Holocene; earthquakes, recurrence intervals ... 5880
marine mammals, management organizations 6125
Alaska: Gulf of
aphotic zone; chlorophyll; pigments, phycoerythrin fluorescence 5457
tectonics; plate boundaries, Pacific-North American 5911
accretionary prisms, melting in; rocks, granitic, generation . 5939
Alaskan Stream
structure, stability; currents 4417
albedo
increase; greenhouse effect; global warming 6246
albedo: cloud
North Atlantic, over; natural vs anthropogenic factors 5756
Aleutian Arc
magma, parental composition, importance; basalts, calc-alkaline, tholeiitic evolution 3645
-Trench; crust; discussion 4143
Seguam volcanic center; Pleistocene, Mid-; lava, basalt to rhyodacite suite 5400
Seguam; basalts 5401
petrogenesis; magma 5402
deformation, models 5421
plastic pollution; fishing nets, drift and gill; problems and solutions 4340
Alexandria
Egypt; sediments, short core, geochemistry 3506
harbor; Egypt; anthropogenic pollution 4045
Egypt; heavy metals 5235
Alexandrium
tamarense; Maine: Gulf of; toxic blooms; currents, alongshore transport in 4201
algae (See also microalgae; kelps, seaweeds; more at FLORA ...)
Black Sea, Romanian coast; benthic macrophytes; annotated bibliography 3793
Hong Kong; Copepoda, inhabitants, 8 n.spp. of siphonostomes; sponges 4288
Australia, W coast; seagrasses; temperature, sea, effects .. 4310
invertebrates; metabolic scaling relations, mass transfer explanation 4822
Fiji; notes, distribution records 4931
antiviral extracts; India, coast; bioactive metabolites 6038
possible use; carbon dioxide, sink; review 6304
algae: benthic
Ryukyu Islands; catalog of genera and species 4309
algae: epontic
dimethylsulfoniopropionate; DMSP, possible biological role 4212
Antarctica, ice-covered area near Syowa Station; productivity; phytoplankton 4228
Canada, Chesterfield Inlet; ice, microalgae, seasonal development 4313
McMurdo Sound; evidence for nutrient stress during the spring bloom 4937
algal blooms (More at PLANKTON ...)
deposition; sediments, respiration and fluxes, effects on 4249
nutrients; light, limitation; coagulation, effects 5984
algal pigments
diversity; Kerguelen Archipelago; sediments, coastal 3795
Algoa Bay
Euphausiacea; Nyctiphanes, capensis; krill, distribution, biomass 6047
algorithms: genetic
artificial intelligence; for strongly nonlinear geophysical optimization problems 3811
alkalinity (See also pH ...)
high; Okinawa Trough, CLAM hydrothermal field; sulfates, reduction, due to 3566
alkanes (More at HYDROCARBONS ...)
alkylbenzenes
hydrocarbons, isoprenoid; sediments, distribution in 5198
distribution; North Sea, W; sediments, coastal 5233
linear alkylbenzenesulfonates; Japan, Tamagawa Estuary, removal from 5236
Alps
E; Europe, Meliata-Hallstatt ocean evolution; Carpathian Mountains, W; significance for early development 3595
altimeters (More at REMOTE SENSING ...)
altimetry
calibration to geopotential anomaly and isotherm depths; North Atlantic, W; circulation 5648
satellite data; circulation, models 5664
altimetry: radar
sea state, bias 5030
altimetry: satellite
equilibrium wave spectrum and sea state bias 3310
collinear pass data analyzed 3855
altruism (More at ECOLOGY ...)
aluminum
dissolved, effects; Weddell-Scotia Confluence; silica, biogenic, dissolution kinetics 4006
dissolved; Weddell Sea 5178
Alvin, Mid-Atlantic Ridge (Use AMAR area)
AMAR area (More at Mid-Atlantic Ridge)
Amazon Plume
mud dispersal 5273
Amazon River
counterparts, comparison; seawater; humic matter 5192
America
conquest of; Christopher Columbus; some reflections 5014
amino acids
exchange; biota, in; measurement methods 4178

and fatty acids; organic matter; phytoplankton, production by ... 4838
quantification; chemical analysis ... 5190
dynamics; California, S; films, surface; microbiota ... 5521
carbohydrates; lignin; sediments, compositions in ... 5803
composition; Mollusca, shells; fossil record ... 6368
ammonia
equilibria of the marine multiphase system; nitrogen cycle ... 5823
ammonification (More at NITROGEN CYCLE ...)
ammonium
regeneration; Weddell-Scotia Confluence, spring ... 4017
seawater, analysis; phosphorus ... 5174
regeneration and grazing; Chesapeake Bay; zooplankton, small vs large ... 6301
pools, variations; Denmark; sediments, coastal, different types ... 6302
Ammothella
n.sp.; California, off San Nicolas Island; Pycnogonida, ammotheid ... 4281
Amoebae
naked; Clyde Estuary, water column; U.K. ... 4298
Amphipoda
aorid; Argentina; Lembos, fuegiensis, argentinensis, n.spp. ... 3769
urohaustoriid; Australia; Nepelle, nelera, n.gen., n.sp. ... 3770
paracalliopiidae; Great Barrier Reef; Yhi, yindi, n.gen., n.sp. 3771
iphimediidae; Antarctic Peninsula; Maxilliphimedia, longipes, redescribed ... 3776
deep-sea; Eurythenes, gryllus; stable elements and Po-210 ... 3781
dexaminid; Great Barrier Reef; Guernea, ipilya, yamminye, n.spp. ... 3786
corophioid; Papua New Guinea; Kamaka, taditadi, n.sp. ... 3787
corophioid; Great Barrier Reef; Wombalano, yerang, n.gen., n.sp. ... 3788
life histories; Bering Sea; community structure ... 4283
Florida, Keys; Cerapus, n.sp., notes on male behavior ... 4287
Gammarus, zaddachi; migration ... 4922
stegocephalid, 3 spp.; metals, biology in relation to feeding ... 4925
stirred by whale activity; Bering Sea; seabirds, feeding ... 5450
2 infaunal spp.; New Zealand; toxicities, acute; cadmium ... 6075
Hyperiidae, life forms; relative abundances in different ocean areas ... 6501
anaerobic muds (More at MUD ...)
anaerobic sediments
estuarine; cadmium, partitioning ... 5797
analytical chemistry
spectrometry, atomic; annual review ... 6276
Andaman Sea
extensional tectonics; possible stress model ... 4728
Bengal: Bay of; wind-driven circulation ... 5037
Bengal: Bay of; wind-driven circulation; wind, monsoons 6160
Bengal: Bay of; wind-driven circulation ... 6173
andesites (More at IGNEOUS- ...)
Angola
shelf, slope; demersal fauna ... 6006
Anguilla
japonica; Mariana Islands, W of; spawning, area discovered 5502
animals
Caribbean area; hurricanes, responses to; ecosystems; plants ... 4192
Anomura
Indian Ocean, W; Munida, n.sp., n.description ... 6498
Anostraca
Texas; Branchinella, new ... 5543
anoxia
Santa Barbara Basin; Foraminifera, benthic, fluctuations ... 5556
anoxic basins
Black Sea, 1988 expedition; oceanography; collection ... 3816
anoxic brines
Orca Basin; bacteria, archaebacterial activity ... 5524
anoxic chemocline
Black Sea; sulfides, oxidation ... 3510
anoxic sediments
Orca Basin; lipids, *Spartina*, selective alteration ... 5221
Norway, W, Barsnesfjord ... 5863
anoxic water
deep; Baltic Sea; Ciliata ... 6463
Antarctic Circumpolar Current
Indian sector; fronts; current transport ... 3880
Antarctic Peninsula
Amphipoda, iphimediidae; Maxilliphimedia, longipes, redescribed ... 3776
S George VI Ice Shelf; sea ice; stratigraphy, stable isotopes, salinity ... 3910
margin, active processes ... 4731
aerosols; elements, composition ... 5168
Sterna, paradisaea; seabirds; migration, northbount ... 6482
Antarctic Treaty
11th Special Consultative Meeting; policy, and public debate; pollution, concerns; report ... 4346
Antarctica
sea ice, floe aggregate; rheology and movement ... 3341
E; U.S., SW; Australia, and Laurentia, Pacific margins; plate tectonics, reconstructions; supercontinents; discussion 3631
proto-Pacific margin; Gondwana, tectonomagmatic controls on breakup; plate tectonics ... 3637
coast; bacterioplankton ... 3754
fronts, Antarctic Slope Front nature and significance ... 3886
sea ice, zone; biota ... 3905
Weddell-Scotia Confluence; Scotia Sea; Weddell Sea; metals, Cd, Cu, Fe ... 3995
around; sediments, low-temperature opal-CT precipitation ... 4083
around; silica, biogenic; organic matter, carbon; sediments, cycling and accumulation in ... 4084
Wilkes Land, comparison to; Red Seas and central; margin tectonics, passive ... 4129
ice-covered area near Syowa Station; productivity; phytoplankton; epontic algae ... 4228
waters around; Copepoda, carnivorous; Euchaeta, antarctica, feeding ... 4293
living resources; krill, fisheries management ... 4341
global warming; climate change, evidence ... 4377
shelf waters; mixing; gas exchange ... 4395
Lutzow-Holm Bay; ice, fast, beneath; water masses, exchange 4429
fluctuations; sea ice, extent ... 4479
Lake Hoare; lakes, water level changes; ice, cover thickness changes; climate, local ... 4565
cyclones, meso-, regimes ... 4607
around; submarine canyons, levees ... 4659
beaches; Holocene; fossil record ... 4704
Cenozoic; margin sediments; record of glacioeustatic and tectonic events ... 4730
chondrites; meteorites, breakup, delivery to Earth ... 4812
Breid Bay; organic matter; phytoplankton blooms ... 4840
early spring; phytoplankton blooms; ice, platelet layers, in ... 4864
waters around; stratospheric ozone, depletion; radiation, UV; phytoplankton, biology ... 4865
gravity field, from satellite altimetry ... 5365
waters; iron, effects; productivity; phytoplankton ... 5476
King George Island; microbiota, ETS activity; temperature, influence ... 5537
coastal zone; katabatic wind, evolution ... 5752
stratospheric ozone, depletion; irradiance, UV, effect on ... 5772
Holocene, Early; climate, optimum, evidence for; ice cores ... 5884
Gondwana, and predecessor; continents, supercontinents ... 5919
Cephalopoda; squid, diets ... 6007
E; seabirds; penguins, Adelie, mapping rookeries ... 6026
Bicosta spinifera; Southern Ocean; Baltic Sea, Saroeca attenuata; Choanoflagellata ... 6069
ships; pollution, prevention; international law ... 6117
McMurdo Station; wastewater outfalls; mixing characteristics 6119
case in point; science; politics; interaction in international relations ... 6127
stratospheric ozone, depletion; biosphere, significance to ... 6265
ice cores; atmospheric carbon dioxide; ice ages, last; C isotope composition ... 6357
Ross Sea, Terra Nova Bay; organochlorines, PCBs, DDTs, HCB; fish ... 6505
circum-, to 30°S; Southern Ocean; atlases, geological and geophysical ... 6512
anthropogenic pollution
Alexandria, harbor; Egypt ... 4045
antibiotic<s> (More at DRUGS ...)
antifoulants
biocides; tributyltin; tin, TBT toxicities ... 6076
antimicrobial activity
bacteria ... 4269
antimony
dissolved; Black Sea; arsenic, dissolved ... 3478
Antipatharia
coral skeletons; architectural, mechanical properties ... 5540
aphotic zone (More at ZONES ...)
Alaska: Gulf of; chlorophyll; pigments, phycoerythrin fluorescence ... 5457

Aphotopontius
probolus sp.nov.; Pacific, E; Copepoda, Siphonostomatoida . 4284
apparatus (See especially OCEANOGRAPHIC APPARATUS and by specific class or type ...)
oceanographic; sampling, biological; instrumentation; catalog of collection in Monaco Oceanographic Museum; in French, English abstract 4353
Aptian
and Albian; Neotethys, paleogeography 3583
Aqaba: Gulf of (See also Elat: Gulf of)
aqaria
saltwater; reef communities, raided 6124
aquaculture (See also agronomy, hatcheries, mariculture and by specific organism; more at CULTURE ...)
mariculture; annual buyer's guide and industry directory (1992) 3806
business, joins science; conference 4326
aquatic communities (More at COMMUNITIES ...)
aquatic ecosystems
toxins, vinyl chloride, stability analysis; biota 5576
aquatic environments
Mediterranean Sea; elements, chemical species, reactivity; symposium 3998
Arabian Gulf
S; Oman: Gulf of; oxygen; phosphate 3500
Mexico: Gulf of; carbonate sediments, facies; hydrocarbons, fields 4799
fish; arsenic, levels 4941
Dubai Creek; macrobenthos; sewage outfalls, near 4950
coastal habitats, subtidal; thematic mapping 4965
Arabian Plate
NW, beneath; lithosphere 4781
Arabian Sea
NW, during SW monsoon; phytoplankton blooms; interannual variability 3693
E, Prathap Ridge complex; magnetic field 4718
seamounts, detection; altimeter data 5237
seamounts, detection; satellites, noise spectrum 5241
Foraminifera, planktonic percentage; sediments 5337
circulation; water column, premonsoon hydrography 5641
E central; Bengal: Bay of, N; salinity, field, evolution; during summer monsoon 5798
Bombay High waters; basalts, tholeiitic, petrology 5928
NW; circulation, during SW monsoon 6153
monsoons; water column, effects on; particulates 6529
arc tectonics
Holocene; Hellenic Arc 5910
Arcachon Basin
Biscay: Bay of, S; zooplankton, exchanges 5467
Zostera, noltii; eelgrass, importance; heavy metals, budget; in French, English abstract 6063
archaeology: marine
South Africa, excavation of the *Oosterland* in Table Bay 5634
Archean
cratons; continents, formation 6393
Early; crust, formation; plate motions; tectonics 6395
arcs (More at LITHOSPHERE ...)
arcs: island
Caribbean Sea, region; stratigraphy 3596
arcs: volcanic
model; Thailand, new Permo-Carboniferous geochemical data 3639
Arctic area
Ward Hunt Ice Shelf; ice, physical properties, structure, stratigraphy 3343
sea ice; pack ice stresses and strains 3363
Mesozoic; Europe; seaways, structural foundation and evolution 3578
Copepoda, exploitation by; sea ice 3779
leads and wing cracks; ice, fracture on large and small scales .. 3909
climate; GCM simulations compared 3947
marine mammals, research; remote sensing, AVHRR imagery 4177
explorations; Nansen: Fridtjof; history of science 4359
Fram Strait; Yermak Plateau; winter oceanographic conditions 4386
currents, West Spitsbergen Current, role; ice, edge position formation 4481
pack ice; LF vibrational motion 5086
ice temperature; AVHRR remote sensing 5088
sea ice; morphology statistics 5090
environmental protection; international law 5617
cloud plumes; fronts, and ice movement, relation to 5743
research, for; submarines, nuclear 6105
paleogeography, antropogene; seismoacoustic profiling 6320
Arctic Ice Dynamics Joint Experiment (Use AIDJEX)
Arctic Ocean
W; sea ice; autumn distributions 3350
sea ice; seasonal model simulations 3355
ice-ocean interactions, model; circulation, interannual variability 3356
ice-ocean interactions, model; circulation, interannual variability; numerical study 3364
Gastropoda; Limacina, helicina, midsummer diet 3766
PCBs; pesticides, chlorinated; organochlorines; food webs 3802
Pleistocene; Foraminifera; sediments; fossil record ... 4114
sea ice, reflectances; remote sensing 4482
basin; North Atlantic, great Salinity Anomaly, possible relationships to; atmospheric circulation, winter 4580
W, shelf; rifts 4794
Atlantic; ocean-atmosphere interactions; weather forecasting, FOAM model 5786
pack ice; ice leads, over; atmospheric convection, buoyant 6220
Arctocephalus
australis; Peru; Pinnipedia; seals, South American fur; early mortality causes 4877
Argentina
Rio de la Plata, Estuary; tides; storm surges 3306
Rio Cuarto crater field; bolide impacts, oblique 3680
Amphipoda, aorid; Lembos, fuegiensis, argentinensis, n.spp. 3769
coastal zone; tectonics, neo-; sea level, changes 4070
Bahia Blanca; Tintinnina, abundance, composition 4929
Argentine Basin
W; boundary currents 5044
Argentine Sea
Dinoflagellata; Gyrodinium, cf. aureolum; blooms, unusual 4858
argon dating (More at DATING ...)
aromatic hydrocarbons (More at HYDROCARBONS ...)
arsenic
dissolved; Black Sea; antimony, dissolved 3478
speciation and adsorption; iron oxyhydroxides, diagenetic .. 4000
Liverpool Bay; sediments; mercury 4043
levels; Arabian Gulf; fish 4941
effects; Decapoda; Crangon, crangon, survival and metabolism 6508
artificial ecosystems (More at ecosystems ...)
artificial intelligence
genetic algorithms; for strongly nonlinear geophysical optimization problems 3811
artificial islands (More at ISLANDS ...)
artificial reefs (More at REEFS ...)
Ascidiacea
Japan: Sea of 4913
Florida; epifauna, ascidians; early post-settlement mortality . 5506
colonial; larval settlement 5509
aseismic ridges (More at RIDGES ...)
ash layers: volcanic
Iceland, Lake Torfadalsvatn; deglaciationast, high-resolution record 5881
ash: volcanic
ice sheets, Greenland and Antarctic; atmospheric transport, interhemispheric 5891
Asia
SE; Paleozoic, Late; Mesozoic; paleogeography 3597
Ninetyeast Ridge; India; paleomagnetism, constraints from; plate motions 5388
E, over; North Pacific, remote, over; atmospheric dust, concentrations 6268
aspartic acid racemization
Mollusca, shells; dating 5832
assays (See also bioassays ...)
assessment: hazard
U.S., Volcano Hazard Program; volcanism 5409
assessment: impact
and remedies; pollution 4338
assessment: risk
fisheries management; sources of uncertainty 4980
Asterias
rubens; German Bight; organochlorines 6077
Asteroidea
North Pacific, NE; biogeography, of origin and radiation; fossil record; sand dollars, dendrasterid 3614

asteroids
earth-crossing binary, evolution; bolide impacts 6142
original distribution; numerical experiments 6145
asthenosphere (More at EARTH ...)
atacamite
Atlantic; metalliferous sediments 4092
Atlantic (See also North-, proto-, and South Atlantic, and narrower geographic, physiographic and zonal designations ...)
tropical; circulation, seasonal changes 3284
Pacific; thermohaline circulation; inter-ocean circulation modelled 3285
over; atmosphere; mercury, global concentration increase .. 3459
E equatorial, and equatorial Africa; climate, 220 kyr record; sediments, from 3591
spatial models; primary production; geomathematics application 3709
metalliferous sediments; atacamite 4092
Cape Verde Fracture Zone; basalts, titanomagnetite compositions 4137
Bivalvia; Thyasiridae, deep-sea, morphology 4276
E; Cyanophyta, checklist; in French, English abstract 4311
W tropical; circulation, surface, seasonal variations 4391
upper equatorial; circulation, iso- and diapycnal 4392
in seismic regions; bottom currents 4412
equatorial; waves, long 4453
over; Africa, over; atmospheric convection, deep 4592
seawater, surface; helium, anomalies 4621
Romanche Fracture Zone; ferromanganese crusts, growth rate 4810
temperate eastern; biota, transequatorial connections 4824
Mediterranean Sea; Indian Ocean; microplankton; ATP, variations in 4828
baseline; metals, Cu, Cd, Pb; neuston 4958
tropics; altimetric and hydrographic data compared 5021
climate, variability; ocean-atmosphere interactions 5130
tropical; air-sea interface, patterns; drought, sub-Saharan, associated with 5140
Pacific; Southern Ocean; organic matter, DOC 5193
Nd-Sr isotope evidence; paleocirculation; currents, dramatic changes during past 80 myr 5341
WOCE network evaluation; temperature, SST, at 150 m, and average over upper 400 m 5637
circulation, prediction; modelling, FNOC 5640
equatorial; tropics, ocean dynamics; Rossby waves; W boundary scattering 5746
Arctic Ocean; ocean-atmosphere interactions; weather forecasting, FOAM model 5786
W tropical; Western Tropical Atlantic Experiment, WESTRAX; overview 6095
North Equatorial Countercurrent, annual cycle; currents, and countercurrents 6184
hurricanes, formation; ocean-atmosphere interactions; role of environmental asymmetries 6260
Chesapeake Bay; Bivalvia, oysters, conspecific; salinity tolerance, mechanisms 6492
along flow lines; abyssal hills, morphology 6420
Atlantis II Deep
Red Sea; magnetic field, data; hydrothermal and geodynamic interpretation 4122
Atlantis II Fracture Zone
peridotites; basalts; open system melting and spatiotemporal variation 6400
atlases
geological and geophysical; Southern Ocean; Antarctica, circum-, to 30°S 6512
atmosphere (See also air, AIR-SEA INTERACTIONS, BOUNDARY LAYERS, FRONTS, greenhouse effect, stratosphere, troposphere ...)
solar cycles; correlations 3424
mechanisms responsible; Beaufort Sea; sea ice, annual field reversal 3432
water vapor, physical variation; carbon dioxide; relationships 3453
Atlantic, over; mercury, global concentration increase 3459
from; nutrients, episodic inputs; pelagic ecosystems; role in chemical and biological dynamics 3950
as source; carbon dioxide, transfer to the deep ocean; organic matter, -mineral interactions 3954
by; heating, upper ocean; ocean-atmosphere interactions 4579
multiscale phenomena; Pacific, W; tropics 4591
Norwegian Sea; cold air outbreaks 4595
clouds, satellite composite climatologies; weather forecasting 4601
relations; Quasi-Biennial Oscillation; Southern Oscillation 5156
solar cycle, 11-year; summer associations 5173
contributions to; volcanic emissions; carbon dioxide 5407
sulfur, emissions to, natural source 5768
oxidation, capacity, past and future changes 5773
effects; Kuwait; fires, postwar; oil smoke 5783
Southern Ocean; bromochloromethanes 6120
-climate conditions, relation to; Mediterranean Sea, N basin; circulation 6159
forcing by; North Pacific; currents, barotropic response ... 6175
500-mb height anomaly; surface temperature; singular value decomposition 6235
models; wind 6257
analyses; U.S., Navy Operational Global and Regional Atmospheric Prediction Systems; weather forecasting .. 6272
atmosphere: primordial
evolution; oxygen, content, box models 4110
atmospheres: stellar
shock waves; breaking waves, on beaches; analogy 6233
atmospheric aerosols
sulfates; combined effects on surface air temperature 3985
Pacific, W; seawater; suspended matter 5782
atmospheric boundary layer (More at BOUNDARY LAYERS ...)
Alaska, coast; turbulence, structure 4581
sea ice 5093
stability; Bengal: Bay of; air-sea interactions, energy flux . 5146
stability; Bengal: Bay of; air-sea interface; energy flux . 6248
atmospheric carbon dioxide
changes; ocean-atmosphere interactions; seasonal responses 4575
Panama Basin; productivity, pulses, Late Quaternary 4698
iron; fertilization 5225
Southern Ocean, chemistry; nutrients, depletion, impact; simulations 5227
and methane; greenhouse gases; air, samples 6263
Antarctica, ice cores; ice ages, last; C isotope composition .. 6357
ice ages, transition to interglacial; C isotopic composition changes 6358
atmospheric chemistry
oxygen, CO_2; deglaciation, penultimate, during; ice, volume changes 4700
global; symposium papers 5769
stratospheric ozone; INSTAC program 6266
hydrocarbons, light nonmethane; Pacific 6271
atmospheric circulation (More at CIRCULATION ...)
GCM; sea ice, model; physical basis for coupling models 3323
GCM; interannual variations, tropical responses 3968
GCM; Northern Hemisphere, wintertime extratropics 3969
surface temperature; modelling intraseasonal LF variations . 4572
winter; Arctic Ocean, basin; North Atlantic, great Salinity Anomaly, possible relationships to 4580
North Pacific; Oyashio; in Japanese, English abstract 4587
oscillations; climate, NCAR model 4600
ocean-atmosphere interactions; heat flux, anomalies 5137
cyclones, tropical; model 5162
North Atlantic; insolation, influence; glaciation, effects .. 5885
Pacific, W; El Niño, 1986-89 ENSO cycle 6255
atmospheric convection (More at CONVECTION ...)
Pacific, western 3438
deep; Africa, over; Atlantic, over 4592
moist; hurricanes, -like disturbances, spontaneous growth ... 4608
buoyant; Arctic Ocean, pack ice; ice leads, over 6220
cellular; North Atlantic, NE 6254
deep; Pacific, W tropical; precipitation, associated, effects; surface energy budget 6256
atmospheric deposition
nitrogen 5808
atmospheric diffusion (More at DIFFUSION ...)
atmospheric dispersion (More at DISPERSION ...)
atmospheric dust
concentrations; Asia, E, over; North Pacific, remote, over .. 6268
atmospheric fronts
cold; Pacific, E, over; observations 3444
cold; South Brazil Bight, response; circulation, subtidal ... 6252
atmospheric ions
Aitken nuclei; Southern Ocean, and polar seas, distribution over 6236
atmospheric methane
climate, effects on 3421

variations; Mauna Loa, observatory 5163
atmospheric oscillations
El Niño, ENSO LF changes 3953
atmospheric oxygen
regulation; carbon, organic, burial efficiency; bottom water, oxygen content; relationships 4035
geological record, throughout 4111
atmospheric particles
North Sea, inorganic N, S, and Cl species 5778
atmospheric phosphorus
Mediterranean Sea, NW 5775
atmospheric pressure
instability lows; polar lows 4597
increases; geomagnetic field, disturbances, during 4717
depiction; cyclones, intense extratropical 5155
atmospheric radiation
thermal; sea ice, growth 6222
atmospheric sulfur dioxide
Mauna Loa, Observatory 5165
atmospheric teleconnections
circulation, dynamics, northern summer 4588
atmospheric temperature (More at TEMPERATURE ...)
Weddell Sea, over; remote sensing, retrieval scheme 3412
structure; Pacific, W tropical, over; El Niño, development, during; in Chinese, English abstract 5735
atmospheric transport
and deposition; iron 5218
interhemispheric; ice sheets, Greenland and Antarctic; volcanic ash 5891
atmospheric turbulence (More at TURBULENCE ...)
fronts, atmospheric and oceanic; air-sea interactions 4574
atmospheric vorticity
transport; climate, models 3967
atmospheric waves
air currents; coastally-trapped; review 3970
selective amplification in CISK model 3971
Kelvin-Helmholtz; frontal inversions 4599
atoll<s> (See also microatolls; more at ISLANDS, REEFS ...)
atoll sediments
Eniwetok Atoll 4663
ATP
variations in; Mediterranean Sea; Indian Ocean; Atlantic; microplankton 4828
Australasia
Isopoda; Limnoriidae 3777
Australia
and Laurentia, Pacific margins; U.S., SW; Antarctica, E; plate tectonics, reconstructions; supercontinents; discussion 3631
Amphipoda, urohaustoriid; Nepelle, nelera, n.gen., n.sp. ... 3770
SE; Isopoda; Cirolanidae, new records 3773
W; Leeuwin Current, observations, models; currents 3871
W; Leeuwin Current, for; climate change, implications ... 3881
climate, winter; temperature, ocean, to the west 3963
South; River Murray, Mouth; dynamic aspects 4079
S, Lacepede shelf; dolomites, synsedimentary detrital; carbonate sediments 4091
W; Leeuwin Current, activity; carbonate platforms, Abrolhos, evolution 4108
W, and Great Barrier Reef comparisons; corals; spawning, mass 4277
W coast; seagrasses; algae; temperature, sea, effects 4310
Darwin Harbor; Bivalvia, oysters; metals, heavy, seasonal variations 4321
Western; Leeuwin Current, influences; currents; coastal zone, climate, biota; symposium 4366
Bonney coast; coastal upwelling 4434
Fly River Delta, Torres Strait; sediments; metals, Cu, Pb, Zn 4647
SE slope; sediment failures 4667
coastal erosion, catastrophic; tsunamis, 105 kya 4703
NW; Mesozoic; Himalayas, northern; margin, evolution .. 4736
Moreton Island; Cetacea; Tursiops, truncatus, feeding station; porpoises 4876
Cephalopoda, sepiolid; Rossiinae; taxonomic review 4881
Decapoda; Stenopus, n.sp., and S. cyanoscelis redescribed .. 4920
W; Moreton Bay; sand banks, subtidal, evolution; bedforms 5258
N; Victoria Delta; sediments; bedforms, chenier sequence development 5262
NW; Joseph Bonaparte Gulf; sedimentation, terrigenous 5276
Oligocene, Late, and Early Miocene; Foraminifera, reticulate globigerines; fossil record 5349
SW; Mysidacea; Rhopalophthalmus, constrictus n.sp.; Australomysis, reubeni n.sp. 5550
W, Rowley Shelf; hydrocarbons; sediments; biota, oysters 5578
tides, anomalous 5690
W, Esperance Harbor; sea level oscillations 6205
BMRC tropical limited area model; weather forecasting 6274
W; seagrass beds; colonization, patterns; epifauna, mobile 6469
Australomysis
reubeni n.sp.; Australia, SW; Mysidacea; Rhopalophthalmus, constrictus n.sp. 5550
Axel Heiberg Island
NW of; margin, Canadian polar 4764
Axial Volcano
Juan de Fuca Ridge; heat flux; hydrothermal vents, areas 5934

backarc<s> (More at ARCS ...)
backarc basins
Okinawa Trough; report on DELP cruises 4062
New Zealand, Taupo volcanic zone; tectonics, and structure 5408
evolution; Lau Basin, ODP Leg 135; tectonics 6384
backscattering: acoustic
the parabolic approximation 3380
parabolic equation 4500
bacteria (See also cyanobacteria; coliforms, microvibrions; more at MICROBIOTA ...)
sediment; Texas, San Antonio Bay; meiofauna, consumption by; microphytobenthos 3746
activity; estuarine sediments 3755
heterotrophic; nitrogen fixation; in Spanish, English abstract 3756
chemoautotrophic S-oxidizing; Black Sea 3757
Vibrio, spp., RNA content variations during starvation and recovery 3759
cell size; motility, and energetics, influence on 3760
Mn-reducing, isolation and identification; Black Sea; manganese, microbial reducing potential 3761
seawater; survival of Bacillus licheniformis 3762
star-shaped-aggregate-forming; Agrobacterium, 5 n.spp., 3 nom.rev. 3763
marine; Exxon Valdez; hydrocarbons, interactions with; oil spills 3799
microbiota; abyssal zone; Japanese research project; report 3842
S-reducing; Bivalvia, with; sediments, temporarily oxic 4267
antimicrobial activity 4269
enteric; Protozoa, role in regulation; seawater 4904
coastal; degradation, oxidation of linear alkylbenzene sulfonate 4908
caulobacters; phylogeny reflects habitat 4909
temporal variability; coastal zone 4910
are they involved?; Dinoflagellata, toxic; toxicities 4938
Sargasso Sea, biomasses in; cyanobacteria; prochlorophytes; eukaryotes, photosynthetic 5481
after starvation; enzymes, production 5523
archaebacterial activity; Orca Basin; anoxic brines 5524
heterotrophic; Bengal: Bay of, Madras coast 5528
Alteromonas luteoviolaceus; iron, acquisition; siderophore, production 5530
methane-utilizing; fatty acids, occurrence, significance 5531
LAS-degrading; coastal zone, waters 5533
numbers estimation; seawater samples, preserved; effects of storage 5534
oil pollution; petroleum biodegradation 5584
profiles; Great Barrier Reef, lagoon; sediments, coastal ... 6029
Gdansk: Gulf of; surface microlayer 6032
S-, low light adapted; Black Sea 6033
Cu-tolerant; India, SE, Vellar Estuary 6036
utilization; colloids, transport; organic matter, DOC; relationship 6485
methanotrophic; nitrogen metabolism 6486
heterotrophic; Bengal: Bay of, Madras coast 6487
productivity; sediments, and water from saltmarsh lagoon .. 6489
heterotrophic; light scattering 6490
bacteria: abyssal
pressure, sensing 4266
bacteria: estuarine
disease, human, as cause of; ecology reviewed 4270
bacterial biomass
and production; North Pacific, Horizon Guyot and Magellan Rise; seamounts, water column over 5522

bacterial communities
Mediterranean Sea; seagrass beds, above 5535
bacterial films
larval settlement, barnacle; inhibition investigated 4891
bacterial metabolites
enzymes, 5'nucleotidase activity 4264
phosphorus, regeneration, role in 4265
bacteriochlorophyll
Black Sea, distribution and recycling in; chlorophyll; carotenoids 3722
bacteriophages
Helgoland, waters around 5526
bacterioplankton
Antarctica, coast 3754
spatiotemporal variations; genomic DNA cross-hybridization .. 4211
Pacific; productivity, daily 4235
community dynamics 4240
spp. composition shift during confinement 4853
Pacific; novel major archaebacteria group 4905
bacterivory
Thraustochytridae, novel duel role in the sea 6503
Baffin Bay
SE shelf; meltwater; deglaciation, 13.5-7 kya 3571
North Water; polynyas, formation, maintenance model 5718
sediments, diagenesis of plant triterpenoids 5851
Baffin Island
McBeth Fjord; suspended sediments 5212
Bahamas
in anchialine caves; Copepoda, cyclopoid; Speleoithonidae, n.fam 4295
carbonates; diagenesis, shallow-burial 4665
-Grand Banks gigaplatform; Jurassic, proto-Atlantic seaway; carbonate platforms, giga- 4739
Quaternary foreslopes; carbonate platforms; deposition, high- and lowstand 5257
eastern escarpment; erosion, timing; stable oxygen isotopic composition 5323
-Hispaniola collision zone; Caribbean Sea; carbonate platforms 5861
Bahia Seamounts
Brazil Basin; seamounts, bathymetry and distribution 5248
Baja California
Pacific coast; seawater; biota; radiocarbon 3490
Bahia de Los Angeles; chlorophyll; seston; productivity; variability causes; in Spanish and English 3695
off; upwelling zones; chlorophyll, -a variability; in Spanish and English 3696
SW; proteins; carbohydrates; plankton, meso-; in Spanish, English abstract 3718
coastal lagoon; plankton communities; tides, dynamics ... 4219
Estero de Punta Banda; phytoplankton; productivity, annual variation; in Spanish and English 5992
Puerto Don Juan; phytoplankton, community structure variations; in Spanish and English 5997
Balanus
improvisus; salinity, and adult extract, interactive effects; larval settlement 6040
Balearic Islands
around; water masses; in Spanish, English abstract 3298
Balearic Sea
Mediterranean Sea, NW; currents, Liguro-Provencal-Catalan; observations 3292
zooplankton, distribution; in Spanish, English abstract 3710
Baltic Sea
central; denitrification; redox interface 3508
phytoplankton, vernal, heterogeneity, dynamics 4208
Fucus, vesiculosus, radioactivity; Chernobyl fallout 4314
ecosystems; plutonium, distribution 4323
sediments; contaminants, reviewed 4650
Polish coast; Holocene, Mid- and Late; transgression 5328
N coast; zooplankton; community structure; planktivory, dynamics, effects 5493
Fucus, ceranoides; floral recruitment 5561
Kiel Bay; oxygen, deficiency increasing; hypoxia; eutrophication, paradigm 5568
Kiel Bay; benthic communities; eutrophication; hypoxia 5582
model; thermocline turbulence 5726
over; solar radiation, variability; weather, due to 5736
Puck Bay; sediment-water interface; chemical flux 5819
Puck Bay; sediment-water interface; oxygen, uptake kinetics 5820
1979-83; chlorophyll, *a* 5993
Kiel Bight; Foraminifera, response; organic matter, flux rates 6051
Saroeca attenuata; Southern Ocean; Antarctica, Bicosta spinifera; Choanoflagellata 6069
bay; sediments; metals, heavy, decrease; sewage, treatment 6109
restoration, and conservation 6128
ice, mapping with SAR 6217
Sweden, coast; hydrocarbons, PAHs; organochlorines, dioxins, dibenzofurans; pollution, flux estimates, pattern recognition of particulates 6309
Ciliata; anoxic water, deep 6463
central; denitrification; water column; in German 6483
Baltimore Canyon
Trough; extensional tectonics 5379
banks (See also mudbanks; more at COASTS, SEDIMENTARY STRUCTURES ...)
Bannock Basin
Mediterranean Sea, E; organic matter, C accumulation; sapropels, role of productivity in formation 5274
Barbados
Caribbean area; larval settlement; corals, scleractinian .. 3749
accretionary wedges; sediments, smectite-illite transition .. 5281
Barbados Oceanographic and Meteorological Experiment (Use BOMEX)
Barents Sea
Greenland Sea; sea ice, distribution 3328
W; rifting, and seafloor spreading, during; sedimentary wedges, Cenozoic, evolution 3601
macrofauna, sympagic, distribution 3716
Tintinnida; microplankton 4197
primary production; food webs 4226
sediments; hydrocarbons, bituminous 4798
SW, Bjornoyrenna; sediments, glacial geology 5304
barges (More at VESSELS ...)
barite
suspended, as tracer of biological activity; Southern Ocean .. 4023
formation; Southern Ocean; water column 4031
baroclinic circulation (More at CIRCULATION ...)
baroclinic flow (More at FLOW ...)
baroclinic instability
fluid dynamics; bottom heating 3404
role; North Pacific, W; currents, energetics 3921
barometric pressure (More at PRESSURE ...)
forcing; sea level, response 3961
barotropic circulation (More at CIRCULATION ...)
barotropic flow
strait circulation 3860
barotropic waves (More at WAVES ...)
radiation; Gulf Stream, from 3898
barrier bars
and platforms; Newfoundland, St. George's Bay; sedimentation, paraglacial 5844
barrier islands (More at ISLANDS ...)
Lake Erie; sedimentation, history 5841
bars (More at COASTS ...)
bars: barrier
and platforms; Newfoundland, St. George's Bay; sedimentation, paraglacial 5844
basalt<s> (See also lava; more at IGNEOUS- ...)
basalt sills
petrology; Japan: Sea of, Yamato Basin 6403
basalts
spreading centers; magnetization, highs; discontinuities, associated with 3621
calc-alkaline, tholeiitic evolution; Aleutian Arc; magma, parental composition, importance 3645
MORB glasses, He and Ar in; mantle outgassing, magma ... 3649
MORB, isotopic evidence against mixing with plume; Iceland, N of; Kolbeinsey Ridge 3662
titanomagnetite compositions; Atlantic; Cape Verde Fracture Zone 4137
in; mineralization, carbonate precipitation; fluids, flow 4681
North Atlantic; rare earths; mineralization, secondary; karsts, reef carbonate, Tunisia 4687
submarine; lithium, isotopic composition; seawater, Li cycle . 4742
submarine glasses; seamounts, Loihi; mid-ocean ridges; noble gases 4749
MORB; Lau Basin; North Fiji Basin; interpretation of bathymetric data and photographs 5244
petrology; Mariana Trough; in Chinese, English abstract ... 5393

oceanic; iodine, abundances; implications for Earth dynamics . 5395
petrology, tectonic setting; North Fiji Basin 5397
Aleutian Arc, Seguam 5401
submarine; India, Bombay Harbor 5403
tholeiitic, petrogenesis; Hawaii; phase equilibria constraints .. 5925
tholeiitic, petrogenesis; magma, melt segregation 5926
MORB geochronology and petrogenesis; Juan de Fuca Ridge; Gorda Ridge; erratum 5927
tholeiitic, petrology; Arabian Sea, Bombay High waters 5928
MORB; magma, primary; experiments, methods 5929
MORB; magma, primary; applications 5930
MORB petrogenesis; Southwest Indian Ridge 5931
post-spreading Quaternary; South China Sea, Basin, Hainan Island; magmatism 6399
Atlantis II Fracture Zone; peridotites; open system melting and spatiotemporal variation 6400
chemistry, isotopics; Okinawa Trough; spreading centers . 6422

basement
Texas, Gulf coast; margin, passive; deep structure 4758
Ouachita-Precambrian; Mexico: Gulf of, Texas Gulf; passive margins; crust, deep structure 5943
acoustic relief structure; Aegean Sea, Cretan basin; sediments 6440

basin<s> (More at LITHOSPHERE ...)
basin oscillations 4447
subsurface; Bengal: Bay of 5712

basin subsidence
Cenozoic; Vøring Plateau, Outer 3629

basins
Mesozoic, comparative study; Iberides Mountains, Eastern, Spain; Pyrenees, Western, France 3624
extensional, asymmetric; Dead Sea Rift, and El Pilar Fault; faults, transform 5411

basins: abyssal
Mediterranean Sea, E; crust, seismic soundings 6416

basins: anoxic
Black Sea, 1988 expedition; oceanography; collection 3816

basins: backarc
Okinawa Trough; report on DELP cruises 4062
New Zealand, Taupo volcanic zone; tectonics, and structure evolution; Lau Basin, ODP Leg 135; tectonics 5408 6384

basins: brackish
Adriatic Sea, NW; phytoplankton, and hydrology; in French 3730

basins: marginal
Japan, Early Miocene Koura Formation; sedimentation, volcaniclastic 3592
Cenozoic; Mexico: Gulf of; hydrocarbons, distributions . 4803
Delaware Bay; sedimentation 5256

basins: sedimentary
development; Cenozoic, Late; Japan, northern Honshu; tectonics; volcanism; relationships 3603
Bering Sea, St. George Basin, evolution and thermal history; hydrocarbons, potential 4169
Sakhalin; petroleum potential 4804
changes; New South Wales, Jervis Bay 5840
Bengal: Bay of, N, super-thick crust 5852
origin; Mediterranean Sea, W; Valencia Trough 6389

bathyal environments
New Caledonia, off; in French, English abstract 5513

bathymetric charts
Soviet; Indian Ocean, W 5600

bathymetric surveys
Indian Ocean, Central Basin 5836

bathymetry (More at FLOOR ...)
relevance; tsunamis; run-up, modelling 5703
tectonics, trend analysis of features 5834

bathymetry data
statistical algorithms 3533

Bathysiphon
filiformis, major; North Carolina, slope, distribution on; Foraminifera 5557

bathythermographs
XBT depth error corrections; CTD sensors; in Japanese, English abstract 4384

bay<s> (More at COASTS ...)
bay circulation (More at CIRCULATION ...)

Bay of Islands
and Little Port complexes; ophiolites, supra-subduction zone origin 3658

bay oscillations (More at OSCILLATIONS ...)

Bayesian analysis
Ockham's razor; hypothesis selection 4964

bayous
Louisiana; nutrient transport 4021

bays
large, around; beaches, stability 5252

beach<es> (More at COASTS ...)
beach cusp<s> (More at SEDIMENTARY STRUCTURES...)

beach nourishment
artificial; shoreline dynamics; coastal zone, intervention .. 4078
CZM; coastal zone, protection policies 4345

beaches
sloping; edge waves; uniform asymptotics 3318
equilibrium profiles; representation with exponential expression 4069
sloping, on; waves, pattern formation 4445
waves; run-up, prediction 4461
sandy; community structure; role of exposure and latitude .. 4884
stability; bays, large, around 5252
storm/normal profiles; shoreline dynamics 5842
run-up, extreme values estimation 6098
waves, setup; run-up 6202

beaches: estuarine
New Jersey, site-specific controls on processes; wind; waves 4073

beaches: sand
ecology; macrofauna, swash features role 5511

Bear Island
region; polar lows 4596

Beaufort scale (More at WAVES ...)

Beaufort Sea
sea ice, annual field reversal; atmosphere, mechanisms responsible 3432
zooplankton biomass 3712
icecap, beneath; seafloor, beneath; noise, VLF ambient 4524
winter; zooplankton; community structure 5470
bioluminescence, planktonic; sea ice 5987

bed ripple<s> (More at RIPPLES...)

Bedford Institute of Oceanography Net and Environmental Sampling System (Use BIONESS)

bedforms
flow, steady; sediment ridges, formation 4668
Labrador Sea, geomorphology; sediments, deep-sea channel/submarine yazoo system 5249
Australia, W; Moreton Bay; sand banks, subtidal, evolution 5258
chenier sequence development; Australia, N; Victoria Delta; sediments 5262
Norwegian Channel; sediments; pockmarks, geological control 6341

bedload
mutually evasive transport pathways; Bristol Channel; sand transport 3539
parting model; Bristol Channel; sand transport 3543

bedload transport
intertidal zone, sandflats; fauna, passive transport 4072

Bengal: Bay of
Indian coast; intertidal scours, mesoscale 4074
clay minerals; sediments 4669
Andaman Sea; wind-driven circulation 5037
air-sea interactions, energy flux; atmospheric boundary layer, stability 5146
Madras coast; bacteria, heterotrophic 5528
basin oscillations, subsurface 5712
fluxes to; Ganga-Brahmaputra River, system; strontium, isotopes; rubidium; weathering, Himalayan 5794
N; Arabian Sea, E central; salinity, field, evolution; during summer monsoon 5798
N, super-thick crust; sedimentary basins 5852
Madras coast; sediments; water column; mycoflora; fungi 6034
Andaman Sea; wind-driven circulation; wind, monsoons 6160
NW; circulation, and hydrography; monsoons, during retreat 6170
Andaman Sea; wind-driven circulation 6173
air-sea interface; energy flux; atmospheric boundary layer, stability 6248
Madras coast; bacteria, heterotrophic 6487

Benguela Current
ecosystem; Cnidaria, planktonic, effects on; coastal upwelling; wind, reversals 3721
Humboldt Current; Leeuwin Current; currents, major; zoogeography, provinces 4187
ecosystem; food webs, relationships 4189
Benguela Ecology Program, first 10 years 5598

Benguela Ecology Program
first 10 years; Benguela Current 5598
Benguela Upwelling
Namibia, off; zooplankton, composition, distribution 6464
Namibia, off, autumn 1985; phytoplankton 6466
benthic algae
Ryukyu Islands; catalog of genera and species 4309
benthic boundary layer (More at BOUNDARY LAYERS ...)
benthic boundary layers
tidal; height variability 6229
benthic communities (More at COMMUNITIES ...)
correspondence analysis and rank-frequency diagrams 3681
sediments, sedimentary milieu and its consequences 4255
Ligurian Sea; detritus, off cliffs 4882
structure; Pacific, E, deep-sea; communities: benthic, structure; control by oxygen and organic matter gradients . 4890
Solomon Sea; Coral Sea; bathymetric patterns 5503
North Sea, ecology; symposium 5508
South Carolina, sounds; shrimp trawling, effects 5516
Baltic Sea, Kiel Bay; eutrophication; hypoxia 5582
benthic ecology
North Sea, symposium papers 6471
benthic fauna
hypoxia, tolerance 4893
Mediterranean Sea, shallow; evidence of disturbance 4897
India, E coast, Kakinada Bay and backwaters 6019
benthic habitats
restrictions; Reptantia; Homarus, americanus, habitat selection and predation 6020
benthic infauna
North Sea 6476
benthic macroalgae
banks of microscopic forms, analogy with seed banks 4936
benthic macrofauna
New Zealand, Wellington; sewage, and natural seasonal disturbances, effects 4940
German Bight 5505
India, SE coast, Cuddalore-Uppanar backwater 6018
China, Jiulong Estuary intertidal zone; in Chinese, English abstract 6023
benthic macrophytes
Black Sea, Romanian coast; algae; annotated bibliography .. 3793
benthic pollutants
enrichment; Narragansett Bay, mapping 6121
benthic recruitment
manganese crusts, formation; seamounts 6524
benthic storms
Mediterranean Sea 3878
Pacific, subequatorial 4407
benthos (See also epi-, hyper-, macro-, meio-, micro-, phyto- and zoobenthos ...)
Protozoa, and metazoans, interactions; community structure, implications for 4252
contributions to ecosystem metabolism; California, Tomales Bay; nutrients, benthic fluxes 4629
sediments; biomass; organic matter, residence time 4894
impacts on; North Sea; offshore oil; production installations 5573
trends; England, NE coast; sediments, trends; waste disposal, sewage sludge 5612
sand-dwelling; relationship with environmental parameters 6015
soft-sediment; patchiness 6017
numerous; biodiversity 6135
Bering Sea
circulation, effects; marginal ice zone 3365
St. George Basin, evolution and thermal history; sedimentary basins; hydrocarbons, potential 4169
Amphipoda, life histories; community structure 4283
nutrients, regeneration; oxygen, demand; sediments 4630
Amphipoda, stirred by whale activity; seabirds, feeding 5450
hydrocarbons, leakage 5964
N; circulation, reconstruction; comment on variational inverse method 6178
E slope; currents 6185
sonar, images; signal processing, interference fringes 6313
Bermuda
Dictyotales; macroalgae, deep-water; photosynthesis ... 5564
and Barbados; aerosols; trace elements 5774
beryllium
-10; Chesapeake Bay; sediments, provenance 5857
isotope geochemistry; Guaymas Basin; sediments, hydrothermally altered 5871
-10, cosmogenic; Pleistocene, end; Last Glacial Maximum, during, increased production 6356
Beyer's net (More at NETS ...)
bias
sampling, pitfalls; statistical analysis 3810
bioaccumulation
San Francisco Bay; Bivalvia, the Asian clam; hydrocarbons 4954
bioactive metabolites
India, coast; algae, antiviral extracts 6038
bioassays (More at assays ...)
bioavailability
pollutants; organisms, as sensors 4183
biochemical oxygen demand (Use BOD)
biocides
tributyltin; tin, TBT toxicities; antifoulants 6076
biodegradation
PCBs; microbiota 5532
biodegradation: petroleum
oil pollution; bacteria 5584
biodeposition
Chile, S, estuary; Bivalvia, mussels 6472
biodiversity
benthos, numerous 6135
Japan; conservation; corals, hermatypic 6493
bioeconomics: mathematical
fisheries economics 3834
bioerosion
patterns and paleoenvironmental implications; Porites, spp.; corals, ancient and contemporary 3742
biogenic particulates
rings, warm-core, 82B, and surrounding waters 4632
biogenic silica
Holocene; Indian Ocean, SE, accumulation rate in 4105
Weddell Sea; Scotia Sea 4224
Southern Ocean, annual production in 4236
biogeochemistry
World Ocean; Degens: Egon T.; geoscience; memorial volume 4363
marine, and geochemistry; marine chemistry; educational .. 6530
biogeography (More at ECOLOGY ...)
Pacific, E tropical, and the East Pacific Barrier; paleoceanography; fossil record 3584
of origin and radiation; North Pacific, NE; Asteroidea; fossil record; sand dollars, dendrasterid 3614
Suez Canal; Lessepsian migrations; in French, with English abstracts, 6 papers; 7 p 3687
speciation, marine; scale of population structure 6084
biogeography: pelagic 4191
biogeography: tropical
Pacific 5451
biological choruses (More at CHORUSES...)
biological disturbance (More at ECOLOGY ...)
biological diversity
potential anthropogenic effects 4963
biological extinction (More at EXTINCTION ...)
Biological Investigations of Marine Antarctic Systems and Stocks (Use BIOMASS Program)
biological refuges (More at REFUGES ...)
Biological Value Index
community structure, calculations; in Spanish and English .. 3683
biology (See also ECOLOGY, EVOLUTION, species ...)
bioluminescence
estimation; irradiance, in-situ 4241
behavior; imaging system 4817
luminometers, 90 surveyed; chemiluminescence 5596
planktonic; Beaufort Sea; sea ice 5987
biomass (More at ECOLOGY ...)
and production; Spain, Galician shelf; zooplankton, meso- and micro-, structure; in Spanish, English abstract 3692
estimation; Decapoda; Pandalus, borealis; kriging, in marine ecology; sampling, and mapping 4816
Brazil, Cabo Frio; upwelling, and downwelling; productivity, primary; responses compared 4836
sediments; organic matter, residence time; benthos 4894
metabolic rates, feeding; reef communities; zoantharians, octocorals 5515
accumulations; fronts; ecological significance 6459
biomass: bacterial
and production; North Pacific, Horizon Guyot and Magellan Rise; seamounts, water column over 5522

biomass: microbial
Black Sea ... 3753
Hiroshima Bay; community structure ... 6035
biomass: phytoplankton
lagoons, in; wind-induced hydrodynamic control ... 5991
biomass: plankton
Southern Ocean, Indian sector; elements, major; nutrients 6132
biomass: plant
Brazil, Paranagua Bay; macrofauna; marshes, salt, interactions in ... 5517
biomass: zooplankton
North Sea; productivity ... 3708
Beaufort Sea ... 3712
Oyashio, waters, variations in; in Japanese, English abstract .. 4847
biomonitoring
Pinnipedia, Mediterranean monk seal; Monachus, monachus; management, strategies ... 6517
bioremediation: pollution
oil spills; Exxon Valdez ... 6118
biosphere
marine, importance underrated; climate change, global, comment on ... 3945
significance to; Antarctica; stratospheric ozone, depletion . 6265
on; humans, effects; use of paleoenvironmental understanding as key to prediction ... 6521
biosphere: marine
role; global carbon cycle ... 5223
biota (See also MICROBIOTA; more at ORGANISMS ...)
Baja California, Pacific coast; seawater; radiocarbon ... 3490
Antarctica; sea ice, zone ... 3905
in; amino acids, exchange; measurement methods ... 4178
accumulations in tissues; Mediterranean Sea; metals, heavy 4317
evolution, body form; natural selection; wave forces, on organisms ... 4327
transequatorial connections; Atlantic, temperate eastern 4824
edible species; Tyrrhenian Sea, N; mercury, content 4942
toxins, vinyl chloride, stability analysis; aquatic ecosystems 5576
oysters; Australia, W, Rowley Shelf; hydrocarbons; sediments ... 5578
Mexico, Campeche Bank; hydrocarbons, aliphatic; sediments ... 6074
aquatic; elements, frequency distributions, correlations 6078
Trinidad; hydrocarbons ... 6081
molal concentrations in; elements, availability, electron configuration ... 6305
biotelemetry (See also TAGGING; more at TELEMETRY ...)
bioturbation
size-dependent; particles, deep-sea ... 6021
bird<s> (See also sea- and shorebirds; ornithology ...)
birds
Mariana Islands; seabirds; new and unusual records 4902
Biscay: Bay of
S; Arcachon Basin; zooplankton, exchanges ... 5467
Cantabrian Sea; water column, stability, effects; phytoplankton, size and biomass succession patterns ... 6450
Cantabrian Sea; primary production, patterns ... 6456
Biscayne Bay
plastic debris, floating; fouling ... 4978
Bivalvia
shells; metals, organic- and crystal-bound; estimation methods 3804
toxic response; metals, mixtures ... 3805
with; bacteria, S-reducing; sediments, temporarily oxic 4267
Mytilus, galloprovincialis; metallothionein, -like proteins .. 4274
Atlantic; Thyasiridae, deep-sea, morphology ... 4276
oysters; Australia, Darwin Harbor; metals, heavy, seasonal variations ... 4321
zooplankton; grazing, rates ... 4815
Tokyo Bay; Mytilus, edulis; tin, organotin compounds 4949
Mytilus, edulis; hydrocarbons, bioconcentration factors ... 4953
the Asian clam; San Francisco Bay; hydrocarbons; bioaccumulation ... 4954
Crassostrea, gigas; particulates; sedimentation, bio-, effects on ... 5539
Crassostrea, gigas, abnormal shell thickening; tin, TBT 5570
bioaccumulation in; India, Bombay coast; metals, Cu, Zn, Fe, Mn ... 5574
Mytilus, consequences of keeping; culture, laboratory 5585
fauna, distribution; Weddell Sea, shelf and slope; Mollusca . 6012
Abra alba; sediments; deposit feeders; interactions 6468
mussels; Chile, S, estuary; biodeposition ... 6472
infaunal; California, salt marsh; microalgae, epibenthic, effects on ... 6477
Conchocoele community; Okhotsk: Sea of, Paramushir gas hydrate seeps; sediment diagenesis, early; food chains 6480
oysters, conspecific; Atlantic; Chesapeake Bay; salinity tolerance, mechanisms ... 6492
Rhone River, estuary and delta; Mytilus, sp., contributions; sediment-water interface, fluxes across; radionuclides 6506
Black Sea
ventilation; salinity, and density; temperature ... 3269
SW, in; currents; water masses, Mediterranean underflow characteristics ... 3280
Mediterranean Inflow, observations; currents ... 3294
redox interface; mixing, traced by Chernobyl fallout 3386
over; aerosols, composition; trace elements ... 3454
chemical variability; redox interface ... 3476
arsenic, dissolved; antimony, dissolved ... 3478
rare earths, dissolved ... 3480
isotopic composition; oxygen; hydrogen ... 3481
helium; neon; tritium ... 3482
suboxic zone; rare earths; redox chemistry ... 3483
water column; iodine, speciation ... 3484
hydrogen sulfide; oxidation, rate ... 3485
carbonates, system ... 3489
sediments, geochemistry; osmium; rhenium ... 3491
SW; plutonium, oxidation states ... 3492
disequilibria in; uranium; thorium ... 3493
distribution and biological turnover in; organic matter, dissolved compounds ... 3495
particulates, source, alteration processes; fatty acids, and sterols, as biomarkers ... 3505
Cariaco Trench, off Venezuela; carbon; nitrogen; sulfur; stable isotope studies ... 3509
anoxic chemocline; sulfides, oxidation ... 3510
geochemistry; manganese; iron ... 3511
water column; sulfur, speciation and sulfide oxidation 3512
sulfur, fluxes, origin; iron; carbon, organic ... 3513
methane, geochemistry ... 3514
manganese, oxidation; redox interface ... 3515
Bulgarian shelf; hydrocarbons, in water, suspensate, sediments 3519
uranium, geochemistry; sediments ... 3546
Holocene, Late; sedimentation, abyssal; climatic and chronological implications ... 3586
fluorescence, vertical distribution ... 3697
distribution and recycling in; chlorophyll; bacteriochlorophyll; carotenoids ... 3722
microbial biomass ... 3753
bacteria, chemoautotrophic S-oxidizing ... 3757
microbiota, production; particle flux ... 3758
bacteria, Mn-reducing, isolation and identification; manganese, microbial reducing potential ... 3761
Romanian coast; benthic macrophytes; algae; annotated bibliography ... 3793
1988 expedition; anoxic basins; oceanography; collection ... 3816
organic matter, biohydrochemistry ... 4034
phytoplankton; flow cytofluorimetry ... 4242
Dnepr River, via; Chernobyl fallout ... 4624
sediments, deep-water, elemental composition ... 4672
bacteria, S-, low light adapted ... 6033
flow, oceanic, characteristics; circulation ... 6164
central; eddies, formation kinematics and structure ... 6228
Blake Outer Ridge
Protozoa, numbers, biomass; sediment communities 6502
blocking
diabathic; frontal waves, upstream; model study ... 3394
blooms
unusual; Argentine Sea; Dinoflagellata; Gyrodinium, cf. aureolum ... 4858
blooms: algal
deposition; sediments, respiration and fluxes, effects on 4249
nutrients; light, limitation; coagulation, effects ... 5984
blooms: phytoplankton
Arabian Sea, NW, during SW monsoon; interannual variability ... 3693
reconciling aggregation theory with observed vertical fluxes ... 4205
Southern Ocean; controlling factors ... 4227
Antarctica, Breid Bay; organic matter ... 4840
Kattegat, 1988; Chrysochromulina, polylepis ... 4845
Antarctica, early spring; ice, platelet layers, in ... 4864
Sweden, W coast; zooplankton, feeding ecology; grazing .. 6003
India, Hooghly Estuary ... 6453
blooms: plankton
spring; diatoms, loss of ... 4831

spring; Middle Atlantic Bight 5472
blooms: spring
seawater, photoreduction in; iron, (III) 4849
Phaeocystis-dominated; English Channel; Copepoda, feeding and grazing rates 5975
dynamics; hydrography, spatial variability 5998
blooms: toxic
Maine: Gulf of; Alexandrium, tamarense; currents, alongshore transport in 4201
Maine: Gulf of, SW; phytoplankton 4202
Norway; Prymnesium, parvum 4825
effects; mariculture; fisheries 5608
cyanobacteria, Trichodesmium; zooplankton 6065
blowouts (More at OIL POLLUTION ...)
Bo Hai Sea
Foraminifera; sediments; in Chinese, English abstract 6053
South China Sea; Huanghai Sea; lead, -210; in Chinese, English abstract 5291
bolide impacts
Manicouagan; Triassic-Jurassic boundary; mass extinction; dates incompatible 3588
oblique; Argentina, Rio Cuarto crater field 3680
asteroids, earth-crossing binary, evolution 6142
Bonin Arc
Solomon Islands; volcanic rocks, Ce and Nd isotopics; mantle, sources 5935
borehole fluids
chemistry; DSDP holes 395A and 534A 5307
chemistry; DSDP hole 504B 5309
boreholes
DSDP; DIANAUT, program; lithosphere 5240
DSDP Hole 395A; crust, data 5242
DSDP; fluid flow 5310
downhole; geophones; hydrophones; comparison 6314
boreholes: seafloor
re-entry technology 5239
bores: internal
non-dissipative 5710
bores: undular
flow, analysis; waves 6207
boron
concentration, isotopes; carbonates, modern 4096
isotope geochemistry; Costa Rica Rift, DSDP Hole 504B; crust 5425
bottom (More at FLOOR ...)
bottom boundary layer (More at BOUNDARY LAYERS ...)
upwelling zones, Canary Upwelling 3877
hydrothermal vents, near 4686
bottom currents (More at CURRENTS ...)
Atlantic, in seismic regions 4412
strong; abyssal fauna 4886
bottom friction
effects; breaking waves 6203
bottom layer (More at LAYERS ...)
bottom reflectance
spectra; estimators 3912
bottom relief (More at RELIEF...)
bottom samplers (More at SAMPLERS ...)
bottom sampling (More at SAMPLING ...)
bottom seismometers (More at seismometers ...)
bottom topography
North Pacific, W, relief characteristics 4067
North Pacific; gyres, subarctic, seasonal cycle 5026
bottom water
oxygen content; atmospheric oxygen, regulation; carbon, organic, burial efficiency; relationships 4035
boundaries: maritime
geodetic surveys; algorithm 5909
boundary currents
vorticity flux, countergradient, generated 3398
eastern; wind stress curl; seasonal cycle 3441
eastern; Southern Hemisphere 3882
laminar separation 4405
western; spin-up; flow, cross-equatorial 5040
eastern; maintenance mechanism 5042
Argentine Basin, W 5044
boundary layer<s> (More at ATMOSPHERE, FRONTS, LAYERS, OCEAN ...)
boundary layer: atmospheric
Alaska, coast; turbulence, structure 4581
sea ice 5093
stability; Bengal: Bay of; air-sea interactions, energy flux . 5146
stability; Bengal: Bay of; air-sea interface; energy flux . 6248
boundary layer: bottom
upwelling zones, Canary Upwelling 3877
hydrothermal vents, near 4686
boundary layer: marine
clouds, persistent 6259
particles, nucleation; aerosols 6269
boundary layers
shear surface and bed; currents 3293
fluid-granular; waves, near-breaking, beneath 6200
boundary layers: benthic
tidal; height variability 6229
boundary layers: thermal
formed in water during calm sunny weather 4582
Brachiopoda
biogeography; Jurassic, Mid-Late; Cretaceous; Tethys; fossil record, in relation to tectonic and paleoceanography 3618
Brachyura
crabs; toxicities, chronic; chemicals, ethyl parathion, isobutoxyethanol ester of 2,4-dichlorophenoxyacetic acid 4322
Cancer, magister; diel migration, larval metamorphosis timing . 4921
Cancer, pagurus, respiratory impairment during hypoxia; metals, Cu, Zn 4960
geryonid, new; Indian Ocean, SW, Walters Shoals 5549
Uca, pugnax, effects of washing; oil spills 6070
brackish basins
Adriatic Sea, NW; phytoplankton, and hydrology; in French 3730
brackish water (More at WATER ...)
Branchinella
new; Texas; Anostraca 5543
Bransfield Strait
carbohydrates, water-extractable; particulates 4013
Copepoda; Metridia, gerlachei, ecology 6497
Brazil
coastal lagoons; trophic dynamics, and water turnover time 3803
off; Ciliata; Mesodinium, rubrum; plankton, subsurface layers 4221
Cyclopoida; Cuipora, janaina n.gen., n.sp.; Cyclopina, caiala n.sp. 4286
Cabo Frio; upwelling, and downwelling; biomass; productivity, primary; responses compared 4836
Paranagua Bay; macrofauna; plant biomass; marshes, salt, interactions in 5517
Ilha Grande Bay; sediments, principal component analysis; in Portuguese, English abstract 5860
Brazil Basin
Bahia Seamounts; seamounts, bathymetry and distribution 5248
Brazil Current
thermal structure; geostrophic circulation; in Portuguese, English abstract 5675
Brazil-Malvinas Confluence
South Atlantic; water masses 6187
breaking waves
gas bubbles, depth, lifetime 3920
air-sea interface; gas exchange, rates 4566
random; engineering algorithm 5066
air-sea interface; gas transfer 5150
bottom friction, effects 6203
on beaches; stellar atmospheres, shock waves; analogy 6233
breakwaters (More at MARINE STRUCTURES ...)
breezes (More at WIND(S) ...)
breezes: sea
and land; air quality, modelling 5754
Dutch Wadden Sea 6258
bridges
effects; straits; flow, reductions 6103
brines
Ca-rich; Mid-Atlantic Ridge, Oceanographer Transform; hydrothermal fluids; inclusions, plutonic rock 4104
pockets, and channel structure; sea ice; cast technique for analysis 5720
hypersaline; bubbles, populations; gas exchange 5727
submarine venting; Mexico: Gulf of, deep 5870
generation and circulation; Cyprus, Troodos; crust, in; ophiolites 6349
brines: anoxic
Orca Basin; bacteria, archaebacterial activity 5524
Bristol Channel
sand transport; bedload, mutually evasive transport pathways 3539

sand transport; bedload, parting model 3543
Severn Estuary; England, SW; sediment, fine, sources ... 4068
Britain (Use Great Britain)
British Columbia
Bute Inlet; turbidity currents; flow, properties 4422
Dixon Entrance; eddies, Rose Spit 5038
Georgia: Strait of; currents, residual 5041
SW, off; zooplankton, seasonal cycle 5988
British Isles (See also Great Britain, U.K.)
bromochloromethanes
Southern Ocean; atmosphere 6120
bromoform
natural and anthropogenic; Kattegat 4641
Brunhes-Matuyama boundary
geomagnetic field, reversals; Ar dating 5358
Brussels
1853; history of science; the First International Conference on Oceanography 4354
Bryozoa
Lichenopora sp.; Agarum, fimbriatum, on; epiphytes, can herbivore preferences explain distributions? 3739
bubble<s> (More at GAS ...)
bubble oscillations
in inviscid fluid 5722
bubbles
volumetric description; waves, whitecaps 3317
flux; aerosols, marine, spectra; wind, various velocities 3965
oscillations, nonlinear damping of; acoustics 4513
bubbly water; acoustics, transmissivity 4520
submicron film drop production by; seawater 4534
clouds; turbulence, upper ocean dynamics 4536
size distributions 5115
bursting, by; surfactants; air-sea interface, sea-to-air transfer at 5148
populations; gas exchange; brines, hypersaline 5727
bubbles: gas
depth, lifetime; breaking waves 3920
building codes
evaluated; hurricanes 5633
building materials
innovative; seawater; limestone precipitation; carbon, sink for 6144
buildings
and federally subsidized insurance; U.S., politics and policy; CZM; shoreline dynamics 6518
buoyancy
profiles; Pacific, W; fluid dynamics; empirical orthogonal modes 5728
buoyant jets (More at JETS ...)
buoys (See also sonobuoys; more at OCEANOGRAPHIC APPARATUS ...)
heave, pitch and roll; waves, parameter estimators 5069
buoys: hydrophone
drifting; acoustics; for the MOS-1 data collection system 4511
business
joins science; aquaculture; conference 4326

cables (See also ROPES ...)
cadmium
humic matter, humic acid, interaction with, at the mercury/water interface 4005
Fundy: Bay of; seston, partitioning in; lead 4637
partitioning; anaerobic sediments, estuarine 5797
Foraminifera; ice ages; circulation; carbon cycle 5882
New Zealand; Amphipoda, 2 infaunal spp.; toxicities, acute 6075
France, distributions in Bay of Marennes-Oleron; mercury .. 6307
Cainozoic (Use Cenozoic)
Cajon Pass
borehole results; California; San Andreas Fault 5447
Calanoida
Eurytemora, affinis, status studies 3774
Netherlands, tidal inlet; Temora, longicornis, grazing pressure; Phaeocystis, bloom, on 4204
India, Gulf of Kutch salt pans; Pseudodiaptomus, n.sp. 5548
Calanus
3 spp.; Fram Strait; Copepoda, life history; Metridia, longa; in German, English abstract 6495
finmarchicus, spawning at high latitudes; Copepoda 6496
calcareous nannofossils
Jurassic, Upper; North Atlantic, Blake Bahama Basin 3617
Cretaceous-Tertiary boundary; Dinoflagellata; sea level, changes, response to 4115
Cretaceous-Tertiary boundary, stratigraphy across; Israel; Dinoflagellata 5322
Cretaceous, Early 5899
calcareous sediments (More at SEDIMENTS ...)
calcite (More at CARBONATES ...)
preservation cycles; Pacific, equatorial; lysocline, depth, shape 3572
Sr/Mg ratios; carbonate precipitation, rate 5853
calcite dissolution
seawater 6280
calcium
magnesium; simultaneous spectrophotometric determination . 3488
India, E, Hooghly Estuary; magnesium; semiconservative behavior 5821
calcium carbonate (More at CARBONATES ...)
California
central, off; wind; circulation, response 3435
S coast; climate change, rapid, past 7000 yr; marshes, pollen analysis 3577
coast; corals, solitary, fossil; dating, U-series 3607
Santa Maria Basin; macroinfauna, communities 4250
S; Pycnogonida, 2 spp., biology and feeding behavior 4279
off San Nicolas Island; Pycnogonida, ammotheid; Ammothella, n.sp. 4281
Tanaidacea, 2 n.spp., 1 n.gen. 4297
Point Arena; currents, cold filaments; drifter observations ... 4432
Tomales Bay; nutrients, benthic fluxes; benthos, contributions to ecosystem metabolism 4629
shelf; seabed, roughness; shear stress; storms, during 4660
Santa Maria Basin; crust, deep structure; tectonics 4783
Quaternary, marine terraces; Hawaii; sediments; sea level, history 5334
Franciscan Complex; nappes; tectonics; subduction, and metamorphic evolution 5346
San Andreas Fault; Cajon Pass, borehole results 5447
S; films, surface; microbiota; amino acids, dynamics 5521
S; slicks, surface; active and passive microwave measurements 5527
central, slope and rise; Foraminifera, benthic, distribution and biomass; oxygen, pore-water content 5555
N; spreading centers, fossil; magma, petrogenesis; ophiolites, Trinity 5932
earthquakes 6136
continental borderland; clay sediments, microfabric 6343
salt marsh; Bivalvia, infaunal; microalgae, epibenthic, effects on 6477
California Current
off Ensenada, Mexico; phytoplankton, assimilation numbers; fronts, recurring 3706
California: Gulf of
El Niño; evidence in 1889 cruise records; in Spanish and English 3426
sediments, surface; zinc, distribution; in Spanish and English. 3555
autumn; phytoplankton, micro-; community structure; in Spanish and English 3705
trapped waves, CTW; observations, theory compared 3900
Guaymas Basin; sediments; clay minerals 4095
seismic slip, variations; plate motions, effect on geodetic measurements of 5367
air-sea interface; heat flux; momentum flux; in Spanish and English 5744
N; Pleistocene; Mollusca, shells; neotectonics; taphonomy 5898
tidal currents, M_2; flow, residual 6197
Rhodophyta; Gigartina, pectinata; growth responses, biomass variation 6504
Callianassidae
American, revision; Decapoda, thalassinid 3783
Campeche: Bay of
Mexico: Gulf of; eddies, cyclonic; in Spanish and English .. 3295
Canada
Sudbury Structure, and Igneous Complex, origin; impact craters 3656
BC; Queen Charlotte Sound, and Hecate Strait; circulation, wind-driven 3863
E coast; vanadium, dissolved, distribution 4042
Chesterfield Inlet; epontic algae; ice, microalgae, seasonal development 4313

Atlantic; metals, heavy; metallothionein; seabirds, concentrations ... 4316
Cumberland Sound; thermoluminescence, properties; sediments, deglacial ... 5286
geothermal evidence from; climate, cold period before recent warming ... 5739
E coast; particulates; fecal pellets, copepod; chemical compositions compared ... 5814
Atlantic coast; Dinoflagellata, toxic; Prorocentrum, lima .. 6067
Fraser River Estuary; sediment transport; saline intrusions, over ... 6329

Canary Basin
Mesozoic; North Atlantic, central, evolution; magnetic field, anomalies ... 6373

Canary Islands
waters around; temperature; salinity; nutrients, and chemistry; in Spanish, English abstract ... 3266
waters, distribution in; chlorophyll, *a*; in Spanish, English abstract ... 3690

Canary Upwelling
Reykjanes Ridge; seismic noise ... 4813
chlorophyll; organic matter, dissolved; fluorescence, variability ... 6461

Cancer
magister; Brachyura; diel migration, larval metamorphosis timing ... 4921
pagurus, respiratory impairment during hypoxia; Brachyura; metals, Cu, Zn ... 4960

canyons: submarine
levees; Antarctica, around ... 4659
Wilmington, South Wilmington, North Heyes; Quaternary; Foraminifera ... 5319
Taiwan, SW, off, Fangliao canyon; morphology and echo characters ... 6323

Cape Hatteras
shelf N of; Gulf Stream; water masses, penetration ... 4425

Cape Verde Fracture Zone
Atlantic; basalts, titanomagnetite compositions ... 4137

Caprellidea
Portugal, SW shelf; Gammaridea ... 4289

carbohydrates
Baja California, SW; proteins; plankton, meso-; in Spanish, English abstract ... 3718
water-extractable; Bransfield Strait; particulates ... 4013
dissolved and particulate; Elbe Estuary, during a tidal cycle .. 4016
particulate, tidal variations; Mersey Estuary ... 4028
amino acids; lignin; sediments, compositions in ... 5803

carbon (See also radiocarbon ...)
POC; Pacific, equatorial; nitrogen, PON; particulates, in .. 3502
Black Sea; Cariaco Trench, off Venezuela; nitrogen; sulfur; stable isotope studies ... 3509
organic; Black Sea; sulfur, fluxes, origin; iron ... 3513
-13, surface, effects on; nutrients, vertical redistribution ... 4019
organic, burial efficiency; atmospheric oxygen, regulation; bottom water, oxygen content; relationships ... 4035
stable isotopes; biogeochemistry ... 4038
cycling; Weddell Sea, -Scotia Sea, during ice retreat; phytoplankton; microbiota ... 4210
flux; Chesapeake Bay; picoplankton ... 4215
sedimentary, quality; France, Arcachon Bay flats; seagrass beds, and oyster parks; benthic respiratory potential ... 4272
budget; eutrophic ecosystems; sulfur, metabolism, role; sediments, dynamics ... 4646
isotopic data; Foraminifera; fossil record; model for interpretation ... 4709
nitrogen; phytoplankton, growth and degradation ... 4830
inorganic, mechanisms of uptake; phytoplankton ... 5492
isotope biogeochemistry; sediments, methanogenic; erratum . 5818
stable isotopic analysis; Texas, Houston Ship Channel; organic matter; seawater; sediments ... 5826
isotopic composition alteration; organic matter, early diagenesis; sediments ... 5850
organic, distribution; North Atlantic; organic matter; glaciation, last maximum ... 5854
organic, flows, flux; English Channel; sediment communities ... 6014
sink for; seawater; limestone precipitation; building materials, innovative ... 6144
C-14 activity; North Pacific, central; Sargasso Sea; organic matter, DOC ... 6299
isotopic composition; crude oil, marine ... 6442
budget and energy flow; Kattegat, SE; eutrophication ... 6445
budget; climate change; ice ages; report ... 6527

carbon cycle
inverse model ... 4041
Phanerozoic; paleoclimate ... 4691
catalytic conversions; seawater, DOC ... 5630
Foraminifera; ice ages; circulation; cadmium ... 5882
implications; Cenozoic, during; weathering, chemical; subduction, of pelagic carbonates ... 6353

carbon cycle: global
marine biosphere, role ... 5223
World Ocean, role ... 5824
carbon dioxide, natural sinks; workshop papers ... 6306

carbon dioxide
atmosphere; water vapor, physical variation; relationships . 3453
ancient atmospheric pressures; goethites, inferred from ... 3611
anthropogenic, oceanic uptake of; climate change, global; comment; major uncertainties ... 3946
hurricanes, implications for; climate, warming; discussion .. 3952
transfer to the deep ocean; atmosphere, as source; organic matter, -mineral interactions ... 3954
air-sea disequilibrium; South Pacific, autumn; air-sea interactions ... 3959
content; Southern Ocean, Indian sector, highly variable source/sink; surface, water ... 4010
fixation dynamics; Southern Ocean ... 4037
content, paleovariations; ice cores, Antarctic ... 4113
dissolved; Africa, West; Lake Nyos; degassing, to prevent catastrophic effervescence ... 4370
climate; clouds, changes in ... 4560
sulfides; carbonates; diffusion technique for determinations in water and sediments ... 4619
uptake simulation; circulation, GCM ... 4626
in surface water; North Atlantic; organic matter; relationship ... 4645
North Atlantic, E; phytoplankton, spring bloom, influence of; oxygen ... 4868
in and over ocean; Pacific, equatorial; El Niño, 1986/88 to La Niña 1988/89 ... 5164
North Sea, Netherlands; oxygen; seasonal behavior ... 5186
anthropogenic; sediments, marine, burial in; commentary ... 5213
interhemispheric transport; circulation ... 5215
ice cores, data; incompatibility with biotic source reconstructions ... 5219
uptake; fossil fuels, from ... 5226
anthropogenic; oceans, uptake by, revised budget ... 5228
volcanic emissions; atmosphere, contributions to ... 5407
fugitive; climate change; report ... 5626
sequestration; ocean injection ... 6099
dissolved, seasonal variability; water column, Ocean Station P 6284
partial pressure; seawater; fiber optic sensor development ... 6285
sink; macroalgae, potential use; seaweed farming ... 6303
sink; algae, possible use; review ... 6304
natural sinks; global carbon cycle; workshop papers ... 6306

carbon dioxide: atmospheric
changes; ocean-atmosphere interactions; seasonal responses 4575
Panama Basin; productivity, pulses, Late Quaternary ... 4698
iron; fertilization ... 5225
Southern Ocean, chemistry; nutrients, depletion, impact; simulations ... 5227
and methane; greenhouse gases; air, samples ... 6263
Antarctica, ice cores; ice ages, last; C isotope composition .. 6357
ice ages, transition to interglacial; C isotopic composition changes ... 6358

carbon dioxide disposal
deep-ocean injection ... 6138

carbonate<s> (See also calcium carbonate; calcite, limestones ...)

carbonate cementation
Kattegat; sediments ... 5275

carbonate dissolution
sediments, influence on radiocarbon ages; dating, carbon ... 3573
North Atlantic, Davis Strait; sediments ... 5847

carbonate platforms
evolution; Turonian, and early Senonian; Tethys, African; margin, segmented continental ... 3574
evolution; Cretaceous, upper, to Pleistocene; Florida, W shelf 3582
Abrolhos, evolution; Leeuwin Current, activity; Australia, W ... 4108
model to simulate development ... 4664

giga-; Jurassic, proto-Atlantic seaway; Bahamas, -Grand Banks gigaplatform ... 4739
Bahamas, Quaternary foreslopes; deposition, high- and lowstand ... 5257
Caribbean Sea; Bahamas, -Hispaniola collision zone ... 5861
response; Indian Ocean, Broken Ridge; sea level, changes; discussion ... 6365
carbonate precipitation
rate; calcite, Sr/Mg ratios ... 5853
carbonate sedimentation
cyclic; Florida, W margin, past 5.4 myr ... 6362
carbonate sediments (More at SEDIMENTS ...)
Australia, S, Lacepede shelf; dolomites, synsedimentary detrital ... 4091
diagenesis ... 4675
facies; Mexico: Gulf of; Arabian Gulf; hydrocarbons, fields ... 4799
climate, oceanographic isotopic signals ... 5277
Tasmania, W; variations with water depth ... 5299
carbonate terranes
unconformities; Mexico: Gulf of; Florida Escarpment, development ... 3556
carbonates
system; Black Sea ... 3489
modern; boron, concentration, isotopes ... 4096
carbon dioxide; sulfides; diffusion technique for determinations in water and sediments ... 4619
Bahamas; diagenesis, shallow-burial ... 4665
temperate shelf, O and C isotopic fields; Tasmania; New Zealand ... 5196
carbonates: pelagic
mass accumulation rates; productivity, paleo- ... 5883
carbonates: peritidal
cyclic; ice-house vs greenhouse eustatic controls ... 4670
carbonyl sulfide
oceanic source; seawater, surface ... 5187
careers
science; women; tenure ... 4989
science; women; physical oceanography ... 4990
Caretta
caretta; sea turtles, Mediterranean loggerhead; clutch size ... 4878
Cariaco Trench
off Venezuela; Black Sea; carbon; nitrogen; sulfur; stable isotope studies ... 3509
Caribbean area
Barbados; larval settlement; corals, scleractinian ... 3749
hurricanes; ecosystems, effects on ... 4185
hurricanes, responses to; ecosystems; plants; animals ... 4192
circulation; lagoons, backreef ... 5031
Guadeloupe; coastal zone, effects on; hurricanes, Hugo; in French, English abstract ... 5449
reef communities, sub-rubble ... 5512
coral reefs; tourism, impacts ... 5602
islands, 1969-89; tropical cyclones ... 5764
Caribbean Plate
N boundary; faulting, transcurrent, from; subduction, frontal, to ... 4729
morphology, structure; plate boundaries, development; margin, accretionary; tectonics ... 5374
South America; collision tectonics; accretionary terranes, wedging ... 5385
Caribbean Sea (See also narrower geographic physiographic and zonal designations ...)
region; island arcs; stratigraphy ... 3596
St. John; hurricanes, Hugo, 1989; reefs, primary framework, effects on ... 4247
St. John; hurricanes, Hugo, 1989; coral reefs, effects on ... 4253
off Colombia; Isopoda, cirolanid; Metacirolana, n.sp., redescription ... 4292
Chicxulub, structure; catastrophism, global; impact craters, buried; report ... 4374
international laws; environmental protection, species and ecosystems ... 4983
Colombia; margin, morphology; in French, English abstract ... 5246
S; coral reefs; storms, features ... 5843
Bahamas, -Hispaniola collision zone; carbonate platforms ... 5861
superficial waters; Orinoco River, outflow; water masses, contribution to; in Spanish, English abstract ... 6189
Caridea
reproductive biology; Weddell Sea ... 6049
carotenoid pigments (More at PIGMENTS ...)
Black Sea, distribution and recycling in; chlorophyll; bacteriochlorophyll ... 3722
Carpathian Mountains
W; Europe, Meliata-Hallstatt ocean evolution; Alps, E; significance for early development ... 3595
Catalan Cordillera
coastal; Neogene; Valencia Trough; Iberian Peninsula; crust, vertical movements, constraints on extension ... 6426
catastrophism (See also extinction; more at GEOLOGY, EVOLUTION ...)
global; Caribbean Sea; Chicxulub, structure; impact craters, buried; report ... 4374
Permian-Triassic boundary; mass extinction ... 5010
cathodoluminescence (More at luminescence ...)
causality
and the choice of measurements for detection; human impacts 3824
caves: submarine
fauna; Mysidacea ... 6499
cavitating fluids
as; pack ice, modelling ... 5715
Cayman Trough
faults, transform; mapping; discussion ... 5416
Celtic Sea
Irish Sea; wind-driven circulation; model ... 3271
Irish Sea; tides, model ... 5692
cementation: carbonate
Kattegat; sediments ... 5275
Cenozoic
early; Norwegian Sea, Hammerfest Basin; sedimentation ... 3594
Late; Japan, northern Honshu; sedimentary basins, development; tectonics; volcanism; relationships ... 3603
Vøring Plateau, Outer; basin subsidence ... 3629
geology; Europe, NW; margin sediments, and adjacent deep-sea ... 3679
Antarctica; margin sediments; record of glacioeustatic and tectonic events ... 4730
Mesozoic; margin, evolution ... 4738
Mexico: Gulf of; hydrocarbons, distributions; marginal basins ... 4803
South China Sea, N, and Guangdong coast; volcanism; in Chinese, English abstract ... 5404
Radiolaria; Pterocorythidae, origin, evolution ... 5903
during; weathering, chemical; subduction, of pelagic carbonates; carbon cycle, implications ... 6353
Late, high resolution studies; Pacific, E equatorial, ODP Leg 138; sediments; paleoclimate ... 6361
spore-pollen assemblages; East China Sea; shelf sediments 6367
Valencia Trough; magmatism; volcanism, and structural evolution, relationship ... 6402
Cephalopoda
octopus, primates of the sea; intelligence, predatory nature; educational ... 3845
Voss: Gilbert L.; memorial symposium ... 4245
sepiolid; Australia; Rossiinae; taxonomic review ... 4881
Antarctica; squid, diets ... 6007
2 bathybenthic spp.; Mediterranean Sea, NW ... 6467
Cerapus
n.sp., notes on male behavior; Florida, Keys; Amphipoda ... 4287
Ceratoserolis
egg size and composition; Weddell Sea; Isopoda ... 6046
cerium
anomaly, carrier; pelagic sediments; leaching, chemical ... 6346
Cetacea
whales, minke, food and daily food consumption ... 3736
organochlorines, heterogeneous distribution; whales, baleen, blubber; implications for sampling procedures ... 3798
Orcinus, implications for the evolution of foraging specializations; whales, killer ... 4243
Australia, Moreton Island; Tursiops, truncatus, feeding station; porpoises ... 4876
50 years of sightings; England, SW, Cornish coast ... 5501
Saint Lawrence belugas; whales, isolated, endangered ... 6008
dolphins, bottlenose; locomotion, swimming, wave-riding ... 6010
whaling, commercial; International Whaling Commission, could end ban; policy, and law ... 6137
Cetacean and Turtle Assessment Program (Use CETAP)
Chaetognatha
distribution; rings, warm-core, Kuroshio ... 4916
chamber: water level
fluctuating; marshes, tidal; for biogeochemical experiments ... 5787

chambers (More at HABITATS ...)
Chang Jiang
Estuary; China; hydrocarbons, non-aromatic, fractionation between dissolved and particulate phases 3523
channel flow
Korea, Keum Estuary; sediments, dispersal 5267
turbulent diffusion; models 5724
channels (More at COASTS ...)
salt marsh, macrotidal; turbulence, near-bed, characteristics and structure 3918
initiation and the problem of landscape scale; seabed 4066
headless submarine canyons; accretionary wedges; sediment failures, and fluid flow, seepage force; vents, focused venting 6350
channels: river
paleo-; Namibia, S, off; coast, parallel to 5837
channels: submarine
geometry; deep-sea fans, classification 6322
chaos
and order; currents, dynamics 5046
ray; acoustics 5101
ray; acoustics 5102
charts
navigational; positioning; navigation 6106
charts: bathymetric
Soviet; Indian Ocean, W 5600
chemical analysis
metals, complexes, separation; ion chromatography with UV and potentiometric detection 3467
phenols, compounds; determination by HPLC by linear gradients 3468
multielement determinations; Wadden Sea, German; sediments; sample preparation, techniques 3550
Winkler titration, potentiometric, gran linearization 5185
amino acids, quantification 5190
chemical diffusion
estuaries, and bays; analog model 5607
chemical evolution (More at EVOLUTION ...)
chemical flux
Baltic Sea, Puck Bay; sediment-water interface 5819
chemicals
ethyl parathion, isobutoxyethanol ester of 2,4-dichlorophenoxyacetic acid; Brachyura, crabs; toxicities, chronic 4322
concentration ranges associated with adverse biological effects; sediments; toxicities 4952
toxic; Alaska, Kodiak; Pinnipedia, harbor seals; Phoca, vitulina richardsi; organochlorines 5575
dioxins, chlorinated, and related compounds 4337
chemiluminescence
-flow injection technique; copper, concentration, speciation; seawater, in 3991
luminometers, 90 surveyed; bioluminescence 5596
chemistry: analytical
spectrometry, atomic; annual review 6276
chemistry: atmospheric
oxygen, CO_2; deglaciation, penultimate, during; ice, volume changes 4700
global; symposium papers 5769
stratospheric ozone; INSTAC program 6266
hydrocarbons, light nonmethane; Pacific 6271
chemistry: marine
biogeochemistry, marine, and geochemistry; educational 6530
chemistry: redox
Black Sea, suboxic zone; rare earths 3483
chemocline: anoxic
Black Sea; sulfides, oxidation 3510
chemotaxis (See also pheromones, signal agents, telemediators; more at COMMUNICATION ...)
Chernobyl fallout
Baltic Sea; Fucus, vesiculosus, radioactivity 4314
Black Sea; Dnepr River, via 4624
chert
interoceanic variation; elements, depositional chemistry; sediments 5862
Chesapeake Bay
cohesive sediments; erosion, and consolidation 3549
Rhode River Estuary in fall; plankton, rotifers, microflagellates, bacteria; trophic dynamics, coupling 3699
estuarine ecosystems; plankton; nitrogen, N-15, rapid storm-induced changes 3720
picoplankton; carbon, flux 4215
Tintinnidiidae; Nolaclusilis, bicornis n.gen., n.sp. 4304
plume; nutrients, N-, diel variations in uptake; phytoplankton 4835
plume, associated with; phytoplankton, seasonal 4855
sediments, budget 5259
remote sensing; phytoplankton; chlorophyll, determinations 5473
sediments, provenance; beryllium, -10 5857
silicates, dissolved, annual cycle; phytoplankton, biomass production and fate 5977
ammonium, regeneration and grazing; zooplankton, small vs large 6301
phytoplankton; nutrients, limitation 6458
Atlantic; Bivalvia, oysters, conspecific; salinity tolerance, mechanisms 6492
Chicxulub
structure; Caribbean Sea; catastrophism, global; impact craters, buried; report 4374
Chile
Mejillones del Sur Bay; upwelling zones, identification 5689
outer rise, 1981; earthquakes, depth extent of rupture 6435
S, estuary; Bivalvia, mussels; biodeposition 6472
China
Chang Jiang, Estuary; hydrocarbons, non-aromatic, fractionation between dissolved and particulate phases 3523
Han River Delta; sea level, changes; sediments, postglacial stratigraphy 4080
Hangzhou Bay; sea level, LF fluctuations 5056
Daya Bay, ecology; chlorophyll, *-a* distribution 5478
Kiaochow Bay; fauna, sharp decrease in number of species; baseline 5583
off; aerosols, chemistry, transport 5781
Pearl River mouth; sediments, analysis; in Chinese, English abstract 5869
Qiongzhou Strait; tectonics; subsidence, coastal; in Chinese, English abstract 5917
Jiulong Estuary intertidal zone; benthic macrofauna; in Chinese, English abstract 6023
coasts, along; tides, radiational, semidiurnal 6198
coast; sea level, change; isostasy, relative to 6328
S coast; Pleistocene, Late, since; sea level, changes 6331
chlordane
effects; organochlorine pesticides; intertidal macrofauna 4955
chlorides
concentration, controls over; hydrothermal fluids 5877
chlorinated dioxins
and related compounds; symposium 3820
chlorinated hydrocarbons (More at HYDROCARBONS ...)
chlorine
elemental and $ClNO_2$; troposphere 5770
chlorinity (More at SALINITY...)
chlorofluorocarbons
Southern Ocean; helium; water masses, tracers of 3887
chlorofluoromethanes
relation with geochemical tracers; Southern Ocean, W Indian sector 4049
chlorophyll (More at PIGMENTS ...)
with phytol ester group; photodegradation, in seawater; a marker 3471
a; Canary Islands, waters, distribution in; in Spanish, English abstract 3690
Baja California, Bahia de Los Angeles; seston; productivity; variability causes; in Spanish and English 3695
-a variability; Baja California, off; upwelling zones; in Spanish and English 3696
Black Sea, distribution and recycling in; bacteriochlorophyll; carotenoids 3722
patchiness; upwelling, caused by 3728
surface; Pacific, tropical; merchant ship data 4832
sea ice, beneath; nutrients; sampler 5085
low; nitrates, low uptake rates; nutrients, high; oceanic ecosystems 5200
low; iron, concentrations; nutrients, high; the case for Fe ... 5205
low; phytoplankton; productivity, what controls it?; nutrients, high; symposium 5217
Alaska: Gulf of; aphotic zone; pigments, phycoerythrin fluorescence 5457
determinations; Chesapeake Bay, remote sensing; phytoplankton 5473
-a distribution; China, Daya Bay, ecology 5478
maximum; Southern Ocean; irradiance, -mixing regime; productivity, controls on 5486

a; Baltic Sea, 1979-83 ... 5993
Canary Upwelling; organic matter, dissolved; fluorescence, variability ... 6461
chlorophyll maximum layer (More at LAYERS ...)
Choanoflagellata
Southern Ocean; Antarctica, Bicosta spinifera; Baltic Sea, Saroeca attenuata ... 6069
chondrules
compositional classification scheme; meteorites, chondrite ... 6146
choruses (More at SOUND, COMMUNICATION ...)
Christopher Columbus
America, conquest of; some reflections ... 5014
chromatography
HPLC, determination by; pigments, photosynthetic ... 3682
Chrysaora
sp.; Southern California Bight; Cnidaria, scyphozoan; faunal associates ... 3745
Chrysochromulina
polylepis; Kattegat, 1988; phytoplankton blooms ... 4845
Chukchi Sea
sea ice; mechanical energy balance ... 3354
Foraminifera, communities ... 4302
ciguatera
Dinoflagellata, toxic, associated with; effects of T, S, and light intensity ... 6068
ciguatera food chains
Crustacea, possible role ... 5547
Ciliata
Brazil, off; Mesodinium, rubrum; plankton, subsurface layers ... 4221
Southern Ocean, Atlantic sector; Tintinnidiidae, ecology and biogeography ... 4300
tintinnine; Hudson River, Estuary; Nolaclusilis, hudsonicus n.sp., n.fam. ... 4303
England, Plymouth coast; productivity, summer ... 4928
avoidance by; Mesodinium, rubrum; estuarine flushing ... 5553
Baltic Sea; anoxic water, deep ... 6463
circulation (More at ATMOSPHERE, FLUID DYNAMICS, OCEAN ...)
GCM for hindcasting; Indian Ocean ... 3270
and water properties; Indian Ocean, SW ... 3274
baroclinic, wind-driven, and tidal; shallow seas; diagnostic model ... 3277
mean; North Atlantic, NW; eddies ... 3281
horizontal; Mediterranean Sea, E ... 3283
seasonal changes; Atlantic, tropical ... 3284
GCMs; importance of vertical resolution ... 3286
model; North Atlantic; kinetic energy analysis ... 3287
coastal and estuarine; finite element model ... 3288
interannual variability; Arctic Ocean; ice-ocean interactions, model ... 3356
interannual variability; Arctic Ocean; ice-ocean interactions, model; numerical study ... 3364
effects; Bering Sea; marginal ice zone ... 3365
seamounts, effects; flow, oceanic ... 3395
response; California, central, off; wind ... 3435
oceanic and atmospheric, changes; Paleocene-Eocene boundary; Southern Hemisphere ... 3589
Mexico: Gulf of, physics; currents; workshop ... 3856
air and sea; Pacific, W tropical; water masses, W Pacific warm pool; ocean-atmosphere interactions ... 3858
upper ocean GCM; North Pacific ... 3861
vorticity, potential, quasigeostrophic; polytopic vector analysis and EOF analysis compared ... 3862
wind-driven; Queen Charlotte Sound, and Hecate Strait; Canada, BC ... 3863
model; estuaries ... 3866
Mexico: Gulf of; remote sensing ... 3867
Weddell Sea; water masses, deep-water formation ... 3869
Southern Ocean; water masses, biochemistry; collection ... 3893
general; ocean-atmosphere interactions, barocoupling; air-sea interactions ... 3949
regimes; Northern Hemisphere; El Niño, extremes, during ... 3966
quasigeostrophic GCM; generalized inverse ... 4388
Weddell Sea, Maud Rise effects; stratification; gyres, Weddell ... 4389
surface, seasonal variations; Atlantic, W tropical ... 4391
iso- and diapycnal; Atlantic, upper equatorial ... 4392
Namibia, off, 1986; water masses ... 4396
vertical, and internal tides; mixing, processes; energy flux ... 4398
model; climate, studies, for ... 4402
seasonal; North Sea, N ... 4419
meridional; rings, warm-core, 82B, decay; mixing ... 4530
current jets ... 4570
in the pycnocline, effects on; wind stress, alongshore; air-sea interactions ... 4571
general air and sea; ocean-atmosphere interactions; temperature, role ... 4576
dynamics, northern summer; atmospheric teleconnections ... 4588
large-scale general; North Atlantic; clouds, presence, role ... 4602
GCM; carbon dioxide, uptake simulation ... 4626
through platform flank; Florida Platform ... 4685
Mediterranean Sea, E; new phenomenology ... 4971
Pacific, W equatorial, variability ... 5023
estuaries; marshes, salt ... 5025
variability; gyres, Rhodes ... 5029
Caribbean area; lagoons, backreef ... 5031
Equatorial Undercurrent; currents, model ... 5032
general; model ... 5033
North Sea; fish stocks, recruitment ... 5035
computations ... 5036
Korea, around Cheju-Do; water masses; in Korean, English abstract ... 5052
GCM response; North Pacific; surface temperature, anomaly ... 5139
general; ocean-atmosphere interactions; El Niño, ENSO simulations ... 5141
general; meridional modes of oscillation ... 5143
GCMs; air-sea interactions ... 5144
general; Pacific, tropical; El Niño, ENSO simulations ... 5145
effects; organic matter, transport, fate; nutrients, cycling ... 5194
carbon dioxide, interhemispheric transport ... 5215
paths; Indian Ocean; neodymium, isotopes, as tracers; sediments, supply ... 5282
World Ocean; Pacific; currents; modelling, ocean prediction ... 5638
water column; shipboard prediction with regional forecast model ... 5639
prediction; Atlantic; modelling, FNOC ... 5640
Arabian Sea; water column, premonsoon hydrography ... 5641
North Atlantic, W; altimetry, calibration to geopotential anomaly and isotherm depths ... 5648
gyres, eastern subtropical; ventilation ... 5650
Norwegian Sea; water column, thermohaline structure ... 5652
Gulf Stream, variability, separation; currents ... 5653
nearshore; islands, around; in Japanese, English abstract ... 5654
GCMs; evaluation for Navy Ocean Modeling and Prediction Program ... 5656
vertical; vorticity; fronts, at ... 5658
subtidal response; Scotian Shelf; currents ... 5661
subtidal response to forcing; Scotian Shelf ... 5662
models; altimetry, satellite data ... 5664
tropics, ocean dynamics; theory, computation ... 5665
GCM; thermocline, structure; climate ... 5666
re-; gyres, subtropical; vorticity, cooling spirals ... 5676
interior fronts; spontaneous shocks ... 5679
Passamaquoddy Bay; Maine: Gulf of, E; tides, and tidal power simulations ... 5691
coupled, GCMs; ocean-atmosphere interactions; data assimilation, predictability ... 5745
GCM; air-sea interactions; wind, response to ... 5747
prediction, coupled system; ocean-atmosphere interactions ... 5748
Foraminifera; ice ages; carbon cycle; cadmium ... 5882
forecasting; Navy experimental center ... 6097
during SW monsoon; Arabian Sea, NW ... 6153
Mediterranean Sea, N basin; atmosphere, -climate conditions, relation to ... 6159
models; rings, statistical study ... 6161
North Atlantic, E; continuous assimilation in an open domain ... 6162
Black Sea; flow, oceanic, characteristics ... 6164
model; flow, oceanic, characteristics ... 6165
and hydrography; Bengal: Bay of, NW; monsoons, during retreat ... 6170
seasons, as forcing cycles; water column, internal oceanic variability ... 6171
Okhotsk: Sea of, Kuril Basin; eddies, formation ... 6174
reconstruction; Bering Sea, N; comment on variational inverse method ... 6178
Mid-Atlantic Ridge, above and eastward of; currents, North Atlantic Current ... 6186
subtidal; South Brazil Bight, response; atmospheric fronts, cold ... 6252

Magellan: Strait of, Project; sediments; water column, hydrography ... 6511
circulation: abyssal
buoyancy-driven; in circumpolar ocean ... 4401
baroclinic structure ... 5657
circulation: atmospheric
GCM; sea ice, model; physical basis for coupling models ... 3323
GCM; interannual variations, tropical responses ... 3968
GCM; Northern Hemisphere, wintertime extratropics ... 3969
surface temperature; modelling intraseasonal LF variations ... 4572
winter; Arctic Ocean, basin; North Atlantic, great Salinity Anomaly, possible relationships to ... 4580
North Pacific; Oyashio; in Japanese, English abstract ... 4587
oscillations; climate, NCAR model ... 4600
ocean-atmosphere interactions; heat flux, anomalies ... 5137
cyclones, tropical; model ... 5162
North Atlantic; insolation, influence; glaciation, effects ... 5885
Pacific, W; El Niño, 1986-89 ENSO cycle ... 6255
circulation: deep
North Atlantic, W, bottom water ... 3870
recirculation; gyres, subtropical ... 4394
climate; conveyor belt puzzle ... 5631
circulation: equatorial ... 5028
circulation: fjord
meltwater; tidal currents ... 5022
circulation: geostrophic
governing equations ... 4390
Brazil Current, thermal structure; in Portuguese, English abstract ... 5675
circulation: Lagrangian
explorer; instrumentation ... 5636
circulation: Langmuir ... 5034
vorticity ... 5114
circulation modelling
coupled GCMs; ocean-atmosphere interactions; in French, English abstract ... 3430
Fleet Numerical Oceanography Center ... 5651
Naval Oceanographic Office basin model ... 5655
and prediction; U.S. Navy program ... 5734
Navy prediction program ... 6096
circulation: monsoon
Quaternary, Late; Indian Ocean; wind, forcing of; model results ... 3576
Indian ... 4589
summer; model ... 5154
circulation: shelf
long time-scale, density-stratified model ... 3273
response; internal waves ... 5083
circulation: strait
barotropic flow ... 3860
circulation: Sverdrup
North Atlantic, along 24°N ... 5660
circulation: thermohaline
Atlantic; Pacific; inter-ocean circulation modelled ... 3285
model development and flow dynamics ... 3290
self-oscillations ... 3868
global, changes; water vapor transport, as cause; energy-salinity balance climate model ... 3948
World Ocean ... 4368
multiple equilibrium states ... 4393
auto-oscillations ... 4397
ice ages ... 4694
Indian Ocean; Pacific ... 6166
circulation tracers
NO; Weddell Sea ... 3888
circulation: wind-driven
Celtic Sea; Irish Sea; model ... 3271
Adriatic Sea, N ... 3279
Bengal: Bay of; Andaman Sea ... 5037
evolution ... 6158
Bengal: Bay of; Andaman Sea; wind, monsoons ... 6160
Bengal: Bay of; Andaman Sea ... 6173
circum-Pacific (More at Pacific ...)
Cirolanidae
new records; Australia, SE; Isopoda ... 3773
Clarion-Clipperton Fracture Zone
Pacific; ferromanganese nodules ... 4808
area; sediments, geochemistry; in Korean, English abstract ... 5287
ferromanganese nodules ... 5443
clay<s> (More at SEDIMENTS ...)
clay minerals
kaolinite ... 4026
California: Gulf of, Guaymas Basin; sediments ... 4095
Bengal: Bay of; sediments ... 4669
Paleocene, and Eocene; South Atlantic; Southern Ocean; kaolinite, distributions, implications ... 5339
India, Visakhapatnam shelf; sediments ... 5856
clay sediments
microstructural classification ... 3559
North Pacific, E; nodules, distribution, geotechnical properties ... 5442
microfabric; California, continental borderland ... 6343
clays
smectite-rich; India, Cochin, Mangalore; sediment geotechnical properties ... 5864
climate
solar cycles; geomagnetic field, variability; weather ... 3417
effects on; Southern Ocean; sediments, evidence from; water masses, North Atlantic Deep Water ... 3418
seasonal summary; Southern Hemisphere, 1990-91; rainfall, record ... 3419
effects on; atmospheric methane ... 3421
220 kyr record; Atlantic, E equatorial, and equatorial Africa; sediments, from ... 3591
history; glaciation; geological record ... 3612
North Atlantic, Late Quaternary; Pteropoda; sediments, preservation in ... 3616
record; Montastraea, annularis; corals, sibling species, bleaching ... 3768
Indian Ocean, SW; weather; variability ... 3939
forcing; aerosols, anthropogenic, by ... 3942
anomalies; Europe; El Niño, extremes, associated with ... 3943
Arctic area; GCM simulations compared ... 3947
warming; carbon dioxide; hurricanes, implications for; discussion ... 3952
winter; Australia; temperature, ocean, to the west ... 3963
models; atmospheric vorticity, transport ... 3967
variation; North Pacific, W; typhoons, activity ... 3979
100-kyr fluctuations; Pleistocene, Pre-, modelling ... 4109
studies, for; circulation, model ... 4402
basic parameter for; continentality ... 4555
variability; radiation, Arctic deficit ... 4556
shifts; weather, patterns; ocean-atmosphere interactions ... 4558
variability studies; temperature, merchant ships' measurements ... 4559
carbon dioxide; clouds, changes in ... 4560
assessing persistence from noise ... 4561
fluctuations; century-scale, review ... 4563
local; Antarctica, Lake Hoare; lakes, water level changes; ice, cover thickness changes ... 4565
NCAR model; atmospheric circulation, oscillations ... 4600
effects; Mount Pinatubo, Philippines, 1991; stratosphere, effects; volcanic eruptions ... 4750
history; Greenland Ice Sheet; ice cores ... 5006
studies; solar radiation, model ... 5126
seasonal summary; Southern Hemisphere, autumn 1991; El Niño ... 5129
variability; Atlantic; ocean-atmosphere interactions ... 5130
variability; Europe, extreme events ... 5131
global radiation, changes ... 5133
and paleohydrologic changes; North Atlantic; sedimentation, clay, impact on; in French, English abstract ... 5290
influences; seawater; strontium, isotope variation; 300 kyr record ... 5321
prediction; report; El Niño, ENSO events ... 5628
deep circulation; conveyor belt puzzle ... 5631
thermocline, structure; circulation, GCM ... 5666
cold period before recent warming; Canada, geothermal evidence from ... 5739
optimum, evidence for; Holocene, Early; Antarctica; ice cores ... 5884
influences; Quaternary, Late, during; manganese crusts, growth rates ... 5966
long-term simulations; ocean-atmosphere interactions; ice-ocean interactions ... 6242
studies; greenhouse effect ... 6243
response; greenhouse gases ... 6245
climate change
rapid, past 7000 yr; California, S coast; marshes, pollen analysis ... 3577
paleoclimate; a geological perspective ... 3581
implications; Leeuwin Current, for; Australia, W ... 3881
global; greenhouse effect, comment on; too little biological research ... 3941

global, comment on; biosphere, marine, importance underrated 3945
global; carbon dioxide, anthropogenic, oceanic uptake of; comment; major uncertainties 3946
data; U.S., federal plan reviewed, report; global warming 4376
evidence; Antarctica; global warming 4377
U.S.; greenhouse effect; global warming, response to 4988
research; universities, role 4991
commentary; sea level, rise or fall? 5008
sea level, rise or fall? 5132
carbon dioxide, fugitive; report 5626
abrupt; ice sheets, unstable dynamics; toward a new paradigm 5737
rates, reconstructions; past and present dynamics 5738
sea level; greenhouse gases, emissions; revised IPCC scenarios 5740
responses to; Pleistocene, plankton and pollen records; Labrador Sea; ocean-atmosphere interactions 5879
global warming; global change debate, research 6133
on trial; global warming 6140
abating; sequential decision strategy 6143
detection; global temperature, spectra 6239
greenhouse effect; annotated bibliography 6241
coastal zone, response predictions; shoreline dynamics 6327
ecological consequences; global warming; sea level, rise 6525
carbon, budget; ice ages; report 6527

climate data
influences on; instrument networks 3425
methods for coupled pattern detection 6240

climate: global
hydrological cycle, role 4557

climate modelling
global warming; limits 5009
ice ages, astronomical theory 6244

climate warming
Northern Hemisphere; greenhouse effect; ice sheets, will they grow? 3422
major; Cretaceous, Mid-; mantle plumes; hotspots 3840

climatology (See also paleoclimatology ...)

clocks: satellite
GOES; accuracy 5593

cloud albedo
North Atlantic, over; natural vs anthropogenic factors 5756

cloud plumes
Arctic area; fronts, and ice movement, relation to 5743

cloudiness: convective 5159

clouds
stratocumulus boundary layer; turbulence, spectra 3439
research; lidar, polarization lidar technique; review and current assessment 3447
motion; wind field, estimates; typhoons, vicinity 3973
estimation using computer vision 3976
convergent bands; Japan: Sea of, over 3977
convergent bands; Japan: Sea of, N, over 3978
changes in; carbon dioxide; climate 4560
satellite composite climatologies; atmosphere; weather forecasting 4601
presence, role; North Atlantic; circulation, large-scale general 4602
temperature; radiative-convective oceanic boundary-layer model 5135
arc-shaped band; eddies, warm, over 5157
regimes, Burger distribution; remote sensing, satellite applications 5757
persistent; marine boundary layer 6259

clouds: cumulus
climatological parameterization 3445
moisture flux, inclusion in parameterization 4603

clouds: stratocumulus
clearing episodes 5158

Clupea
harengus, autumn-spawned; North Sea; herring, larval, distributions 3734
harengus; North Sea; feeding, effects on; herring, larval, infection by helminth parasites 3735

Clyde Estuary
water column; U.K.; Amoebae, naked 4298

Cnidaria
planktonic; Iberian Peninsula; hydrography, features; mesoscale coupling 3707
planktonic, effects on; Benguela Current, ecosystem; coastal upwelling; wind, reversals 3721
scyphozoan; Southern California Bight; Chrysaora, sp.; faunal associates 3745
New Zealand; Hydroida; Stylasteridae, 62 spp. 5538

cnoidal waves (More at WAVES ...)

coagulation
effects; nutrients; light, limitation; algal blooms 5984

coast<s> (See also bars, bays, beaches, channels, cusps, dunes, estuaries, fjords, flats, harbors, ISLANDS, lagoons, marshes, mudbanks, REEFS, shoreline, spits, straits, surf zone, swash zone, tidal zone, wetlands; more at LITHOSPHERE, OCEAN ...)

coast
parallel to; Namibia, S, off; river channels, paleo- 5837

coastal circulation (More at CIRCULATION ...)

coastal erosion (More at EROSION ...)
catastrophic; Australia; tsunamis, 105 kya 4703

coastal habitats
subtidal; Arabian Gulf; thematic mapping 4965

coastal lagoons
France, Thau Lagoon; phytoplankton, population spatial organization; in French, English abstract 3711
zooplankton communities; spatial restructuring and hydrodynamics; in French, English abstract 3713
Brazil; trophic dynamics, and water turnover time 3803

coastal sedimentation (More at SEDIMENTATION ...)

coastal sediments
pollution; chemical analysis of genotoxic components 5571
Dar es Salaam; Tanzania; metals, heavy 6308

coastal upwelling
Benguela Current, ecosystem; Cnidaria, planktonic, effects on; wind, reversals 3721
Australia, Bonney coast 4434
Peru, central, off; sediments, Quaternary, proxies 5892

coastal waves (More at WAVES ...)

coastal zone
Spain, Ria de Vigo and the coastal shelf; water masses, exchanges 3282
sardine-rich ecosystems; population dynamics, and trends, factors influencing; vertebrates, abundant 3686
South Carolina; sea level, rise 3895
seawater; trace metals, partitioning; aerosols, polluted, released from 4047
intervention; beach nourishment, artificial; shoreline dynamics 4078
South Africa; shoreline dynamics, need understanding 4344
protection policies; beach nourishment; CZM 4345
climate, biota; Leeuwin Current, influences; Australia, Western; currents; symposium 4366
bacteria, temporal variability 4910
stressed; colonization 4944
sustainable development 4981
evolution; Holocene; Holland; shoreline dynamics 5251
Rhone Delta; sediments, grain size distribution, longshore variation; test of the McLaren model 5263
effects on; Caribbean area; Guadeloupe; hurricanes, Hugo; in French, English abstract 5449
waters; bacteria, LAS-degrading 5533
suspended matter; river transport 5811
surveying; France, Arcachon Basin 6086
model; pollutant transport 6113
response predictions; shoreline dynamics; climate change 6327

coastal zone management (Use CZM)

coasts
recession and accretion; shoreline dynamics 5255

Coccolithophoridae
Emiliania, huxleyi; presence of vaterite and aragonite in coccoliths 3797
crystal assembly, phylogenetic evolution 5356

Cochin Estuary
India; trace metals 5231

Cocos Plate
downgoing, stress state; Mexico, Isthmus of Tehuantepec; subduction, geometry 5915

Cocos Ridge
uplift; Costa Rica, Pacific coast; plate motions; tectonics; crustal deformation 4147

cohesive sediments
Chesapeake Bay; erosion, and consolidation 3549
model for prediction of settling and consolidation 3561

cold air outbreaks
Norwegian Sea; atmosphere 4595

cold core rings (More at rings ...)

coliforms (More at BACTERIA ...)

collision tectonics
Neogene; Philippines, central; in French, English abstract .. 3627
arc-continent; Indonesia, E; lithospheric extension, post-collision; discussion 3632
Tibet; crust, uplift 4737
Miocene, -Pliocene; Taiwan, E, evidence from; Luzon Arc, collapse 5375
South America; Caribbean Plate; accretionary terranes, wedging 5385
colloids
transport; bacteria, utilization; organic matter, DOC; relationship 6485
Colombia
Caribbean Sea; margin, morphology; in French, English abstract 5246
Caribbean margin; diapirism, mud; sedimentation, fan; faulting, strike-slip 5433
colonization (More at ECOLOGY ...)
coastal zone, stressed 4944
patterns; Australia, W; seagrass beds; epifauna, mobile .. 6469
color (More at LIGHT ...)
color imagery
interpretation; remote sensing; signal processing 6151
comet impacts
multiple; Cretaceous-Tertiary boundary; mass extinction; report 3841
communication (See also choruses, CHEMOTAXIS ...)
communications (See also public media, radio, signal lamps, TELEMETRY, telephone, television ...)
communities (More at ECOLOGY ...)
communities: bacterial
Mediterranean Sea; seagrass beds, above 5535
communities: benthic
correspondence analysis and rank-frequency diagrams 3681
sediments, sedimentary milieu and its consequences 4255
Ligurian Sea; detritus, off cliffs 4882
structure; Pacific, E, deep-sea; , benthic communities, structure; control by oxygen and organic matter gradients 4890
Solomon Sea; Coral Sea; bathymetric patterns 5503
North Sea, ecology; symposium 5508
South Carolina, sounds; shrimp trawling, effects 5516
Baltic Sea, Kiel Bay; eutrophication; hypoxia 5582
communities: estuarine
Portugal, Tagus Estuary; trophic dynamics 6481
communities: fouling
ecology; Malaysia, Johore Strait 3751
communities: interstitial
Mediterranean Sea; Protozoa, ciliated 5554
communities: marsh
Foraminifera, assemblage zones; sea level, and flora, influence 3791
communities: microbial
sediments; biomass, structure variations 5529
communities: periphyton
tin, TBT, and diuron, combined effects; pollution-induced tolerance 5577
communities: phytoplankton
approach to modelling 3731
dynamics; Korea, Cheju Island harbors; in Korean, English abstract 4852
communities: plankton
Baja California, coastal lagoon; tides, dynamics 4219
interacting growth and loss rates 5480
communities: reef
Thailand: Gulf of, Pattaya Bay; temporal variations 3738
sub-rubble; Caribbean area 5512
biomass, metabolic rates, feeding; zoantharians, octocorals ... 5515
raided; aqaria, saltwater 6124
communities: sediment
soft-; indirect effects 4251
effects on; shorebirds, migratory, foraging ecology; predator-prey dynamics 4256
soft-sediment ecology; symposium papers 4257
soft-; patchiness, dynamics; demographic aspects 4260
English Channel; carbon, organic, flows, flux 6014
Blake Outer Ridge; Protozoa, numbers, biomass 6502
communities: seep
Japan, elemental compositions; vent fauna; in Korean, English abstract 6474
communities: zooplankton
coastal lagoons; spatial restructuring and hydrodynamics; in French, English abstract 3713
spatial patterns; temperature, satellite-measured SST 6002
community dynamics
bacterioplankton 4240
community metabolism
Red Sea; Aden: Gulf of; zooplankton 3724
community structure
calculations; Biological Value Index; in Spanish and English 3683
California: Gulf of, autumn; phytoplankton, micro-; in Spanish and English 3705
odels; sediments, soft; parasitism, required? 4190
North Carolina, mesohaline estuary; zooplankton, abundance 4214
soft-sediment; infaunal predators, role 4246
implications for; Protozoa, and metazoans, interactions; benthos 4252
Bering Sea; Amphipoda, life histories 4283
beaches, sandy; role of exposure and latitude 4884
Red Sea, Ras Mohammed; coral reefs 4888
species richness; theoretical perspective 4962
Beaufort Sea, winter; zooplankton 5470
Baltic Sea, N coast; zooplankton; planktivory, dynamics, effects 5493
Red Sea; Copepoda, poecilostomatoid and cyclopoid 5544
rocky shores 5973
Weddell Sea; zooplankton; sea ice, beneath 5999
Hiroshima Bay; microbial biomass 6035
community succession
Fucus, canopy vegetative regeneration 5563
competition (More at ECOLOGY ...)
strategies; Octocorallia 6011
predation; resource utilization; coral reef grazers 6446
compounds: halogen
sediments 5788
compressional waves
speed; Mexico: Gulf of; sediments 3557
computer modelling
science, implications, applications 5595
computer software
geochemistry; mineralogy; volcanology; petrology; applications 4060
mapping, cartographic generalization 5601
conductivity (More at SALINITY...)
conductivity: seafloor 4725
conductivity: thermal
heat flow 5370
conductivity-temperature-depth (Use CTD)
Congo River (See also Zaire River)
conservation
Japan; biodiversity; corals, hermatypic 6493
conservation: environmental
North Sea, coastal and estuarine zones 3831
conservation politics
whaling, setting catch limits; International Whaling Commission; science and sentimentality 6519
contaminant jets
surface layer, spreading in 6516
contaminants
reviewed; Baltic Sea; sediments 4650
continent<s> (More at LITHOSPHERE ...)
continental air masses
aerosols, sea-salt, effects on 4612
continental drift (More at PLATE TECTONICS ...)
continental lithosphere
extended; mechanical strength 3655
subduction, thermomechanics 5432
continental margin (More at LITHOSPHERE ...)
continental rifting
Afro-Arabian Rift, System; crust, thinning; seismic refraction data reviewed 4163
continental shelf (More at SHELF ...)
continentality
climate, basic parameter for 4555
continent-ocean boundaries
Exmouth Plateau; erosion, and thermal uplift 4777
Iberian Peninsula; Tagus Abyssal Plain; crust 4787
continent-ocean transitions
U.S., E coast; Moho, imaged 4766
continents
growth; accretionary wedges, role; plate tectonics 3635
boundaries; Rayleigh waves, incident 4760
supercontinents; Antarctica; Gondwana, and predecessor .. 5919

formation; Archaean, cratons 6393
contourites (More at SEDIMENTS...)
Controlled Ecosystem Pollution Experiment (Use CEPEX)
convection (See also radiative-convection; more at FLUID DYNAMICS ...)
diffusive, onset; salt fingering, in gravity gradient 3388
diffusive, onset; salt fingering, evolution; thermocline 3396
salt-finger, by; thermocline, oxygenation 3925
spherical; fluid dynamics, modal growth and coupling 3926
scale selection in shallow seas; mixing 4526
by; Agulhas Retroflection; water masses, modification .. 4533
fluid dynamics; shear 4541
weakly nonlinear oscillatory; fluid dynamics 4547
deep; Greenland Sea 5024
mass transport, and heat; fluid dynamics 5117
deep, effects; surface temperature 5647
convection: atmospheric
Pacific, western 3438
deep; Africa, over; Atlantic, over 4592
moist; hurricanes, -like disturbances, spontaneous growth ... 4608
buoyant; Arctic Ocean, pack ice; ice leads, over 6220
cellular; North Atlantic, NE 6254
deep; Pacific, W tropical; precipitation, associated, effects; surface energy budget 6256
convection: cumulus
scheme for modeling 3446
convection: mantle
models 3657
subduction, history 3665
numerical models 4166
subduction, effects 4792
thermodynamical response 5418
tectonics, dynamics 5945
hotspots, distribution 5962
convection: thermal
mantle fluids; numerical simulations 3663
convection: thermohaline
catastrophe structure 5122
convective cloudiness 5159
convective flow
patterns; model driven by wind, thermal and saline forcing 3864
convective mixing
density interfaces, across; in Spanish, English abstract 3408
convective waves
transient; Indian Ocean, SW 3975
convergence (More at FRONTS ...)
cooling
produced by; lithospheric stress; crust 4153
Cooperative Investigation of the Northern Part of the Eastern Central Atlantic (Use CINECA)
Coordinated Ocean Research and Exploration Section (Use CORES)
Copepoda
exploitation by; Arctic area; sea ice 3779
South America; Smithsonian collection 3785
Siphonostomatoida; Pacific, E; Aphotopontius, probolus sp.nov. 4284
inhabitants, 8 n.spp. of siphonostomes; Hong Kong; sponges; algae 4288
carnivorous; Antarctica, waters around; Euchaeta, antarctica, feeding 4293
from Brazil; Tropocyclops, spp.; key to American spp. 4294
cyclopoid; Bahamas, in anchialine caves; Speleoithonidae, n.fam 4295
eudactylinid; Eudactylina, 2 n.spp., 1 n.record 4296
migration, vertical, predator-induced 4821
Japan, off Sanriku, and Oyashio Water; zooplankton, distribution; in Japanese, English abstract 4841
density, biomass, distribution; North Sea; meiobenthos, communities 5510
poecilostomatoid and cyclopoid; Red Sea; community structure 5544
poecilostomatoid; Japan; Sagami Bay; Hyphalion, sagamiense n.sp. 5552
feeding and grazing rates; English Channel; spring blooms, Phaeocystis-dominated 5975
planktonic; predator-prey dynamics; predator-induced changes in diel feeding 6044
grazing impact; phytoplankton; zooplankton; size structure relationships 6449
life history; Fram Strait; Calanus, 3 spp.; Metridia, longa; in German, English abstract 6495
Calanus, finmarchicus, spawning at high latitudes 6496
Bransfield Strait; Metridia, gerlachei, ecology 6497
copper
dissolved, distribution; France, Aulne Estuary; in French, English abstract 3507
concentration, speciation; chemiluminescence, -flow injection technique; seawater, in 3991
II, reduction rate; hydrogen peroxide, with, in seawater 4004
Mexico: Gulf of; zinc; episodic event effects on concentration, speciation 6522
coprostanol
geochemistry; Narragansett Bay; sediments; seawater ... 6115
coral reef grazers
competition; predation; resource utilization 6446
coral reefs (More at REEFS ...)
geomorphology; currents, prevailing; larval dispersal 4081
effects on; Caribbean Sea, St. John; hurricanes, Hugo, 1989 4253
Leeuwin Current; ecological perspective 4362
Red Sea, Ras Mohammed; community structure 4888
Caribbean area; tourism, impacts 5602
Caribbean Sea, S; storms, features 5843
South China Sea; ESR and U-series ages 5895
Coral Sea
Solomon Sea; benthic communities; bathymetric patterns 5503
coral skeletons
Antipatharia; architectural, mechanical properties 5540
corals
solitary, fossil; California, coast; dating, U-series 3607
ancient and contemporary; Porites, spp.; bioerosion, patterns and paleoenvironmental implications 3742
and sea anemones, release after cold shock; zooxanthellae; symbiotic microalgae 3747
scleractinian; Caribbean area; Barbados; larval settlement 3749
sibling species, bleaching; Montastraea, annularis; climate, record 3768
New Guinea, Huon Peninsula; dating, ESR and U-series ... 4054
electron spin resonance dating; El Niño, signals 4056
dating, ESR 4061
juvenile, effects on; sedimentation; eutrophication 4258
Australia, W, and Great Barrier Reef comparisons; spawning, mass 4277
skeletal extension; growth, rate assessment 4912
soft, sclerites as defenses; predator-prey dyanamics; fish, as predators 5542
bank-forming, deepwater; North Atlantic, Faroe shelf; Scleractinia; Lophelia, pertusa; fauna, associated 6473
hermatypic; Japan; biodiversity; conservation 6493
core (More at EARTH ...)
mantle; density, estimation precision 4142
geodynamo, theory; magnetic field 4711
solidification; analytical model 4756
seismic anisotropy 4757
inner, translational triplet; density, near Earth's center 4790
thermal history; magnetic field, implications 5002
core-mantle boundary
conducting layer; geomagnetic field, reversals 5364
cores (More at SEDIMENTS ...)
cores: ice
O-18 record; Quaternary, past 150,000 yr; Greenland Ice Sheet 3599
Antarctic; carbon dioxide, content, paleovariations 4113
Greenland Ice Sheet; climate, history 5006
data; carbon dioxide; incompatibility with biotic source reconstructions 5219
Holocene, Early; Antarctica; climate, optimum, evidence for 5884
environmental information 6130
cores: sediment
pollution, histories, sources of error 4048
smearing of profiles in soft sediments 4093
deconvolution profiles 4677
coring (More at SAMPLING ...)
quality control; sediments, mud 3531
Costa Rica
Pacific coast; Cocos Ridge, uplift; plate motions; tectonics; crustal deformation 4147
slope; accretionary prisms; crust, seismic imaging 5247
Caribbean and Pacific coasts; Pliocene; Panama: Isthmus of, closure; fossil record, stratigraphy 6378
Costa Rica Rift
DSDP Hole 504B; boron, isotope geochemistry; crust 5425

countries: developing
oceanography, history of scientific and technical assistance; global commons ... 4357
crabs
evolution; Decapoda; Pagurus, spp. as ancestors of king crabs ... 4280
Crangon
crangon, survival and metabolism; Decapoda; arsenic, effects 6508
Crassostrea
gigas; Bivalvia; particulates; sedimentation, bio-, effects on ... 5539
gigas, abnormal shell thickening; Bivalvia; tin, TBT ... 5570
craters: impact
Canada; Sudbury Structure, and Igneous Complex, origin . 3656
buried; Caribbean Sea; Chicxulub, structure; catastrophism, global; report ... 4374
Avak; Alaska, Barrow; gas fields, genesis ... 5331
creeks: marsh
New Jersey, S; fauna, composition, abundance, biomass ... 6478
Cretaceous
Lower; North Sea, Scapa Field; sandstones, distribution; palynology ... 3558
upper, to Pleistocene; Florida, W shelf; carbonate platforms, evolution ... 3582
Milankovitch cycles, rhythms; paleoclimate ... 3598
Jurassic; South Pacific, E; Tethys; marine connections ... 3600
Jurassic, Late; Pacific, Tethyan ... 3610
Jurassic, Mid-Late; Tethys; Brachiopoda, biogeography; fossil record, in relation to tectonic and paleoceanography 3618
Mid-; climate warming, major; mantle plumes; hotspots . 3840
upper; Foraminifera, abyssal agglutinated; paleoceanography, implications ... 4116
Mid-; mantle plumes; discussion of superplumes ... 5420
Early; calcareous nannofossils ... 5899
Cretaceous-Tertiary boundary
mass extinction; comet impacts, multiple; report ... 3841
Dinoflagellata; calcareous nannofossils; sea level, changes, response to ... 4115
impact hypothesis; extinction, direct and indirect; report .. 4375
stratigraphy across; Israel; Dinoflagellata; calcareous nannofossils ... 5322
sediments; iridium, -rich layer ... 5335
Foraminifera, benthic; extinction, low rate ... 5352
Foraminifera, benthic, changes; DSDP sites 525, 527, 465 ... 5355
Cretan Trough
Aegean Sea; sediments, seismic data ... 4168
Crimean Sea
base of slope; gas hydrates ... 4170
Crown Estate
U.K.; seabed mining; implications for the future ... 3835
crude oil (More at OIL ...)
marine; carbon, isotopic composition ... 6442
crust (See also LITHOSPHERE; more at EARTH ...)
earthquakes, source mechanisms ... 3667
subducting slabs; olivine, metastable tongue, waveform effects ... 3668
Red Sea, birth and early history; rift zones; tectonics; symposium papers ... 4063
strength implications; New Zealand, Western Platform; margin sediments, loading by ... 4097
accretionary wedges; permeability, fluid; hydrofracture, conditions for ... 4103
mantle; magnetization, high temperature viscous, as source for Magsat anomalies ... 4126
implications for thinning processes; Red Sea; rift valleys, axial, and deeps; tectonics ... 4131
Marmara: Sea of; tectonics, neotectonic structure ... 4133
structure; North Atlantic; Gorringe Ridge ... 4140
Aleutian Arc, -Trench; discussion ... 4143
oceanic; Red Sea, beneath ... 4148
lithosphere, stress, strength, viscosity; seismology; symposium ... 4151
lithospheric stress; cooling, produced by ... 4153
compression structures; Pacific, between Clarion and Clipperton fracture zones; fracture zones ... 4154
Rockall Trough; Ireland, offshore ... 4158
thinning; Afro-Arabian Rift, System; continental rifting; seismic refraction data reviewed ... 4163
structure; Red Sea, N ... 4165
earthquakes, source mechanisms; seismotectonics ... 4167
Manokwari Trough; New Guinea Trench; sediments .. 4733
uplift; Tibet; collision tectonics ... 4737
MAR, construction; seamounts; volcanism, role ... 4754
motion; positioning systems, GPS; fault zones ... 4762
Cyprus, Troodos; magnetization, processes; ophiolites ... 4765
formation, evolution; planets; tectonics, mostly Earth; colloquium ... 4779
deep structure; Gorda Plate; Eel River Basin; subduction zones ... 4782
deep structure; California, Santa Maria Basin; tectonics ... 4783
stress; lithospheric flexure; tectonics ... 4785
Iberian Peninsula; Tagus Abyssal Plain; continent-ocean boundaries ... 4787
Nankai Trough; seismic profiles, spread and split-spread .. 4791
density structure; Siberia, -Atlantic system; tectonosphere .. 4795
data; boreholes, DSDP Hole 395A ... 5242
seismic imaging; Costa Rica, slope; accretionary prisms .. 5247
oceanic fragments and terrigenous trench fill; Sakhalin, S; accretionary wedges ... 5288
DSDP holes 333A, 395A, 534A; geothermalism ... 5369
South Pacific; volcanism; mantle, exposed; faults, Garrett transform ... 5423
Costa Rica Rift, DSDP Hole 504B; boron, isotope geochemistry ... 5425
structure; Labrador Sea; rift zones, extinct axis ... 5430
structure; Taiwan, Basin; hydrocarbons, potential; in Chinese, English abstract ... 5438
seismic surveys; BIRPS data ... 5624
movement; seafloor; OBB installation ... 5905
evolution, vertical movements; Mediterranean Sea, W; Valencia Trough ... 5916
basal complex petrology, geochemistry; Norwegian Sea, -Greenland Sea; volcanic islands, Jan Mayen ... 5937
peridotite and gabbros; Mid-Atlantic Ridge, axial valley ... 5940
thickness; seafloor spreading, rate ... 5942
deep structure; Mexico: Gulf of, Texas Gulf; passive margins; basement, Ouachita-Precambrian ... 5943
velocities; plate motions; VLBI observations ... 5947
properties; North Pacific, SW of Hawaii ... 5949
evolution; seismic velocity, impact on ... 5952
structural outline; Mallorca, Serra de Tramuntana ... 6321
in; Cyprus, Troodos; brines, generation and circulation; ophiolites ... 6349
structure, evolution; Valencia Trough, Catalan margin ... 6377
kinematics and deformation; Red Sea; Aden: Gulf of; Ethiopian Rift; tectonics, since the Oligocene; in French, English abstract ... 6381
structure; Tertiary; Valencia Trough; Mediterranean Sea, W; sedimentation, history ... 6383
structural development; Valencia Trough, margins; paleomagnetism, data ... 6385
Gondwana, W; mantle, fragmentation due to hot upflow ... 6391
formation; Archean, Early; plate motions; tectonics ... 6395
control by; Reykjanes Ridge; ridge sedimentation ... 6407
long-wavelength undulations; lithospheric buckling ... 6408
coda-Q; Valencia Trough ... 6409
Japan: Sea of, Yamato Basin; seismic anisotropy ... 6411
velocity structure; Japan: Sea of; Yamato Basin ... 6412
thermal history; sediments, banded iron formations; europium, anomalies ... 6414
deep configuration; Valencia Trough, and its borders ... 6415
seismic soundings; Mediterranean Sea, E; abyssal basins . 6416
tilting; Holocene; Japan, Hokkaido; tectonics ... 6424
seismic profiles; Valencia Trough; Lion: Gulf of ... 6425
vertical movements, constraints on extension; Neogene; Valencia Trough; Iberian Peninsula; Catalan Cordillera, coastal ... 6426
structure, velocity profiles; Valencia Trough, detailed interpretations ... 6429
structure, evolution; Neogene; Iberian Peninsula, E margin; Valencia Trough ... 6433
nature; Red Sea; tectonics ... 6434
structure, velocity profiles; Valencia Trough ... 6436
seismic inversion; Spain, Betic Zone; tectonics, extension ... 6437
T-phase spectra, seismic moments; tsunamis, genesis; seismicity ... 6438
Crustacea
eggs, production; reproduction ... 4927
possible role; ciguatera food chains ... 5547
crustal deformation
Costa Rica, Pacific coast; Cocos Ridge, uplift; plate motions; tectonics ... 4147

Indian Ocean, NE ... 4740
geodesy, and seismology; symposium proceedings ... 5413
forearc; plate convergence, oblique; tectonics; subduction zones ... 6396
cryptofauna (More at FAUNA ...)
Cryptophyceae
Weddell-Scotia Confluence; phytoplankton, nanno- ... 5976
CTD
data; Pacific, equatorial; currents, ADCP ... 6156
CTD sensors
bathythermographs, XBT depth error corrections; in Japanese, English abstract ... 4384
Cuba
5 bays; sediments; heavy metals ... 3518
Cuipora
janaina n.gen., n.sp.; Brazil; Cyclopoida; Cyclopina, caiala n.sp. ... 4286
culture (See also AQUACULTURE, and specific organisms ...)
laboratory; Mytilus, consequences of keeping; Bivalvia ... 5585
Cumacea
Nannastacidae; rediagnosis and revision ... 3789
cumulus clouds (More at CLOUDS ...)
climatological parameterization ... 3445
moisture flux, inclusion in parameterization ... 4603
cumulus convection
scheme for modeling ... 3446
current<s> (See also eddies, drift, gyres, jets, meddies, meanders, rings; more at OCEAN ...)
current jets
circulation ... 4570
current meanders
geostrophic flow; fluid dynamics; eddies, flux ... 3389
current meters (More at METERS ...)
current profilers
ADCP; scattering layers, sunrise, bias profiles ... 6152
current shear
wave-follower estimates ... 5018
current transport
Antarctic Circumpolar Current, Indian sector; fronts ... 3880
Florida Current; heat flux ... 4413
currents
Black Sea, SW, in; water masses, Mediterranean underflow characteristics ... 3280
tidal and subtidal, separation; ADCP observations ... 3291
Liguro-Provencal-Catalan; Mediterranean Sea, NW; Balearic Sea; observations ... 3292
boundary layers, shear surface and bed ... 3293
Black Sea; Mediterranean Inflow, observations ... 3294
Gulf Stream; remote sensing, SAR observations ... 3297
lower-layer, effects; upwelling, wind-driven ... 3302
quasi-3-D modelling; flow ... 3409
finestructure; stratified fluids; conductivity microsensor ... 3849
Mexico: Gulf of, physics; circulation; workshop ... 3856
Leeuwin Current, observations, models; Australia, W ... 3871
vorticity, balance estimates ... 3873
Loop Current; Mexico: Gulf of, W; rings, collision with slope ... 3883
combined flows; shear stress; seabed, rippled, roughness; waves ... 3917
energetics; North Pacific, W; baroclinic instability, role ... 3921
Texas, and Louisiana, shelf; storm surges; hurricanes, induced by ... 3962
prevailing; coral reefs, geomorphology; larval dispersal ... 4081
major; Humboldt Current; Benguela Current; Leeuwin Current; zoogeography, provinces ... 4187
alongshore transport in; Maine: Gulf of; Alexandrium, tamarense; toxic blooms ... 4201
Leeuwin Current, influences; Australia, Western; coastal zone, climate, biota; symposium ... 4366
variability; Somali Current ... 4403
volume transport; Okhotsk: Sea of, to; Soya Warm Current; freshwater, supply; in Japanese, English abstract ... 4404
Kuroshio, structure; Kyushu, SW of ... 4406
equivalent uniform; wave-current interactions, computed ... 4408
Oyashio, long-term variability; sea level ... 4410
net geostrophic transport balance; Oyashio; flow, path; in Japanese, English abstract ... 4411
subtidal; ADCP measurements, tests ... 4414
Oyashio, characteristics; in Japanese, English abstract ... 4415
South Java Current, seasonal variability ... 4416
Alaskan Stream, structure, stability ... 4417
effect of bottom relief on stability ... 4423
hydrography; rings, warm-core, 86B and Kuroshio ring compared ... 4431
cold filaments; California, Point Arena; drifter observations ... 4432
West Spitsbergen Current, role; Arctic area; ice, edge position formation ... 4481
field; JEBAR; fluid dynamics, interpretations ... 4546
Oyashio; collection ... 4552
model; circulation; Equatorial Undercurrent ... 5032
slope; shelf, -ocean boundary ... 5039
residual; British Columbia; Georgia: Strait of ... 5041
slicks; SAR observations ... 5043
effects on; wind ... 5045
dynamics; chaos, and order ... 5046
South Indian Ocean Current; Indian Ocean ... 5047
Agulhas Current, model ... 5048
sediments, incipient motion; waves ... 5261
dramatic changes during past 80 myr; Atlantic, Nd-Sr isotope evidence; paleocirculation ... 5341
World Ocean; Pacific; circulation; modelling, ocean prediction ... 5638
Korea, East Sea; temperature, vertical structure; water collumn; in Korean, English abstract ... 5642
Gulf Stream, variability, separation; circulation ... 5653
inertial; Spain, NE, off; fronts, shelf-slope ... 5659
Scotian Shelf; circulation, subtidal response ... 5661
Kuroshio, variation 1986-88; meanders ... 5663
Greenland Sea; Jan Mayen Current ... 5667
Gulf Stream, path prediction ... 5668
Gulf Stream, satellite imagery; comparison with model results ... 5669
XBT surveys and satellite data compared; Kuroshio, Extension structure; Taiwan Strait; finestructure, T-S ... 5670
North Atlantic, E ... 5671
LF variation; Yellow Sea ... 5672
East China Sea; Ryukyu Islands, E of; Kuroshio ... 5674
Kuroshio, warm filament; Tsushima Warm Current ... 5677
water masses, source; Tsushima Warm Current ... 5682
Korea, East Sea; water column; water masses, chemistry; in Korean, English abstract ... 5686
Korea, adjacent to; water column; in Korean, English abstract ... 5687
ADCP data; North Sea; tides, models ... 5688
Grand Banks, W; Newfoundland; sedimentation, transgressive; waves ... 5696
surface, instantaneous; wave height; GPS data ... 5846
fields, in; sedimentation; particles ... 5907
ADCP; Pacific, equatorial; CTD, data ... 6122
barotropic response; North Pacific; atmosphere, forcing by ... 6156
field, calculation; model ... 6175
Mozambique Channel; flow ... 6179
Agulhas Current, system; rings, shedding ... 6180
Magellan: Strait of ... 6181
velocity interpolation; method ... 6182
and countercurrents; Atlantic; North Equatorial Countercurrent, annual cycle ... 6183
Bering Sea, E slope ... 6184
North Atlantic Current; Mid-Atlantic Ridge, above and eastward of; circulation ... 6185
residual; Florida, Sebastian Inlet; weather, episodic, influence; tides ... 6186
and bottom friction; waves, energy dissipation ... 6195
Sagami Bay; Suruga Bay; internal tides ... 6208
currents: air
atmospheric waves; coastally-trapped; review ... 6214
currents: bottom
Atlantic, in seismic regions ... 3970
strong; abyssal fauna ... 4412
currents: boundary
vorticity flux, countergradient, generated ... 4886
eastern; wind stress curl; seasonal cycle ... 3398
eastern; Southern Hemisphere ... 3441
laminar separation ... 3882
western; spin-up; flow, cross-equatorial ... 4405
eastern; maintenance mechanism ... 5040
Argentine Basin, W ... 5042
currents: density
free-interface; finite element solutions ... 5044
currents: gravity
fluid dynamics ... 4420
currents: longshore
shear, instabilities; theory, observations ... 3932
shear instability ... 3916
... 5673

currents: slope
fluctuations; Taiwan, NE of 6177
currents: tidal
Delaware Bay 4437
zooplankton, horizontal transport 4842
meltwater; fjord circulation 5022
Korea, Gyeonggi Bay; boundary shear velocities 6176
M_2; California: Gulf of; flow, residual 6197
currents: turbidity
British Columbia, Bute Inlet; flow, properties 4422
dynamic Reynolds stress modelling 6226
Glacier Bay, Queen Inlet; delta sediments; slope processes, submarine channels 6333
currents: wind-driven
fluctuations; North Atlantic, E; correction 3296
cusps (More at COASTS, SEDIMENTARY STRUCTURES...)
cyanobacteria (More at BACTERIA ...)
plasmids, endogenous; salinity-dependent copy number increase 3765
Skagerrak, E; Synechococcus, spp., seasonal distribution .. 4207
Agmenellum quadruplicatum; phenanthrene, metabolism of . 4906
Oscillatoria sp. strain JCM; naphthalene, oxidation, NIH shift 4907
Sargasso Sea, biomasses in; bacteria; prochlorophytes; eukaryotes, photosynthetic 5481
Trichodesmium; toxic blooms; zooplankton 6065
Cyanophyta
checklist; Atlantic, E; in French, English abstract 4311
cyclogenesis
North Atlantic, U.S. coast; physical mechanisms influence .. 4609
during FGGE 4610
rapid; vorticity, potential, anomalously high 5766
cyclohexanes
utilization; pollutant degradation; by a marine alcaligenes .. 6080
cyclones (More at STORMS ...)
extratropical, simulations; Southern Hemisphere; model sensitivity 3451
track prediction; Indian Ocean, N, over; storm forecasting 3452
meso-, regimes; Antarctica 4607
prediction; weather forecasting, skill (5-day) 4615
intense extratropical; atmospheric pressure, depiction 5155
tropical; atmospheric circulation; model 5162
cyclones: tropical
simulations with Betts convective adjustment scheme; comparisons 3449
storm forecasting; role of aircraft reconnaissance 3461
analyses; application of GMS data 3980
sea level pressure, minimum; wind speed, maximum 3982
Philippines; new rule of CI number determination in Dvorak technique 3983
thermal wake modelling 4605
storm forecasting, intensity prediction 4613
Caribbean area, islands, 1969-89 5764
South Pacific; Indian Ocean, SE; 1989-90 season 6261
Guam, Joint Typhoon Warning Center; storm forecasting, challenges 6273
Cyclonic Extratropical Storms Project (Use CYCLES)
Cyclopina
caiala n.sp.; Brazil; Cyclopoida; Cuipora, janaina n.gen., n.sp. 4286
Cyclopoida
Brazil; Cuipora, janaina n.gen., n.sp.; Cyclopina, caiala n.sp. 4286
Cyprideis
torosa; Ostracoda; chemistry, ornamentation; in French, English abstract 3772
Cyprididae
and Paracypridinae reviewed; Galapagos Archipelago; Ostracoda, anchialine 4923
Cyprus
Troodos; crust; magnetization, processes; ophiolites 4765
Troodos; brines, generation and circulation; crust, in; ophiolites 6349
Cystoseira
caespitosa, community structure and dynamics; Mediterranean Sea, NW; Fucales 4306
cytometry: flow
light scattering of individual algal cells 4814
CZM
beach nourishment; coastal zone, protection policies 4345
U.S., politics and policy; shoreline dynamics; buildings, and federally subsidized insurance 6518
Daly: R.A.
Moon, origin, early history; overlooked paper 5632
Dar es Salaam
Tanzania; coastal sediments; metals, heavy 6308
data assimilation
signal processing; meteorology; oceanography 3812
data: bathymetry
statistical algorithms 3533
data: climate
influences on; instrument networks 3425
methods for coupled pattern detection 6240
data: extreme value
engineering analysis, models 6104
data management (See also the various scientific disciplines; more at information management ...)
data: satellite
NOAA-AVHRR; signal processing, real time, efficient algorithm 4330
data: scatterometer
impact; storm forecasting, QE II storm development; numerical weather prediction 3464
data telemetry (More at TELEMETRY ...)
dating (More at GEOCHRONOLOGY ...)
incomplete mixing model; sediments 3524
carbon; carbonate dissolution; sediments, influence on radiocarbon ages 3573
U-series; California, coast; corals, solitary, fossil 3607
ESR and U-series; New Guinea, Huon Peninsula; corals ... 4054
ESR, and thermal behavior; Japan; quartz, Al and Ti centers 4057
ESR; Quaternary; sediments, deep-sea, core RC17-177 4058
ESR; corals 4061
Mollusca, shells; aspartic acid racemization 5832
New Zealand, Rotoiti Breccia (Taupo volcanic zone) 4052
thermoluminescence dating; seminar proceedings 4053
corals; El Niño, signals 4056
dating: thermoluminescence
electron spin resonance dating; seminar proceedings 4053
Dead Sea Rift
and El Pilar Fault; faults, transform; basins, extensional, asymmetric 5411
debris (More at SEDIMENTS ...)
anthropogenic, effects; Indonesia, Jayapura; fishermen, subsistence 5610
Decapoda
thalassinid; Callianassidae, American, revision 3783
pandalid; Pandalus, gurneyi, synonymized with P. danae 3790
effects on; seagrasses, shoot density; fish, effects on 4262
Pagurus, spp. as ancestors of king crabs; crabs, evolution 4280
Pandalus, borealis; kriging, in marine ecology; sampling, and mapping; biomass, estimation 4816
Australia; Stenopus, n.sp., and S. cyanoscelis redescribed ... 4920
Mozambique, off; Homolodromiidae, Homolodromia bouvieri rediscovered, redescribed 4924
larval exchanges across; estuarine inlets, mouth closures; implications of anthropogenic changes in frequency and duration of closures 4982
Penaeus, 2 spp., attraction to estuarine water in lab 6043
South Pacific, E; Pycnogonida 6494
Crangon, crangon, survival and metabolism; arsenic, effects . 6508
dechlorination
processes; New Bedford Harbor; Massachusetts; sediments; PCBs 5230
decomposition
characteristics; Hiroshima Bay; organic matter, particulate 6288
decompression chambers (More at chambers ...)
decompression sickness (More at DIVING ...)
deep circulation (More at CIRCULATION ...)
North Atlantic, W, bottom water 3870
recirculation; gyres, subtropical 4394
climate; conveyor belt puzzle 5631
Deep Sea Drilling Project (Use DSDP)
deep towing (More at TOWING ...)
Deep Undersea Muon and Neutrino Dectector (Use DUMAND)
deep-sea fans
classification; submarine channels, geometry 6322
deep-sea geohazards
engineering, challenges 3818
deformation
fields, characteristic propagation in; sea ice 3330

models; Aleutian Arc 5421
intraplate, implications for; plate motions; mantle, upper, dragging; lithosphere, thickness 5921
short timescale; tectonics, long timescale; relationships 5922
deformation: crustal
Costa Rica, Pacific coast; Cocos Ridge, uplift; plate motions; tectonics 4147
Indian Ocean, NE 4740
geodesy, and seismology; symposium proceedings 5413
forearc; plate convergence, oblique; tectonics; subduction zones 6396
degassing
to prevent catastrophic effervescence; Africa, West; Lake Nyos; carbon dioxide, dissolved 4370
Degens: Egon T.
World Ocean; biogeochemistry; geoscience; memorial volume 4363
deglaciation
13.5-7 kya; Baffin Bay, SE shelf; meltwater 3571
penultimate, during; atmospheric chemistry, oxygen, CO_2; ice, volume changes 4700
Wurm-Wisconsin; sea level, histories, global 4701
rebound, Laurentide; Hudson Bay; gravity field, anomaly . 6371
Iceland, Lake Torfadalsvatn; volcanic ash layers 5881
degradation
oxidation of linear alkylbenzene sulfonate; bacteria, coastal .. 4908
and biosorption; Skeletonema, costatum; tin, butyltins; diatoms, and associated bacteria 4956
degradation: pollutant
cyclohexanes, utilization; by a marine alcaligenes 6080
Delaware Bay
tidal currents 4437
sedimentation; marginal basins 5256
Delaware Estuary
sediments; organic matter, terrestrial 4012
metals, accumulation, retention mechanism; marshes, tidal freshwater 4086
Delaware River
Estuary, upper; Holocene, Late, paleoecological development; marshes, tidal freshwater 6330
delta sediments
Mississippi Canyon 4676
stacked; Quaternary; architecture, O isotopics 5338
Glacier Bay, Queen Inlet; turbidity currents; slope processes, submarine channels 6333
demand analysis (More at RESOURCE MANAGEMENT ...)
demersal fauna
Angola, shelf, slope 6006
Dendrogastridae
Ascothoracida; U.S.S.R., V.L. Wagin's collection; designations of lectotypes 3780
denitrification (More at NITROGEN CYCLE ...)
Baltic Sea, central; redox interface 3508
rates; England, SW; marshes, salt, fringing; mud flats 5822
Baltic Sea, central; water column; in German 6483
Denmark
seas around; oxygen, deficits, integrated modelling 3494
polar lows 4594
coastal waters; stratification, summer; picophytoplankton 4866
ammonium, pools, variations; sediments, coastal, different types 6302
density
estimation precision; mantle; core 4142
near Earth's center; core, inner, translational triplet 4790
non-uniform gradients; frontogenesis; gravity flows; fluid dynamics 5118
seawater; salinity; in English and French 5183
ratio, importance; double diffusion, interleaving 6225
density currents (More at CURRENTS ...)
free-interface; finite element solutions 4420
density fronts
on; stratification, effects 3393
density interfaces
across; convective mixing; in Spanish, English abstract 3408
density stratification
during; Adriatic Sea, N; suspended matter, nature, sedimentation 3504
deoxyribonucleic acid (Use DNA)
deposit feeders (More at FAUNA ...)
Bivalvia, Abra alba; sediments; interactions 6468
deposition (More at SEDIMENTATION...)
high- and lowstand; Bahamas, Quaternary foreslopes; carbonate platforms 5257
and winnowing, importance at shelf scale; sediments 5269
sea level, changes, influence; sediments, carbonaceous 5292
Magellan: Strait of; sediments, and sedimentary processes . 6337
deposition: atmospheric
nitrogen 5808
deposits (More at SEDIMENTS ...)
deposits: hydrothermal
Lau Basin; nontronite geochemistry 5312
Guaymas Basin; S, C, O isotope variations 5878
deposits: mineral
Fiji, geological evolution 5301
deposits: shelf
Tyrrhenian Sea, E; sediments, collapse and flow 5867
deposits: sulfide
Au-bearing; mid-ocean ridges; mineralogy, geochemistry ... 3671
massive; Juan de Fuca Ridge; hydrothermalism 5311
precipitation temperature; seafloor; helium/heat ratios .. 6352
Dermochelys
sea turtles, leatherback; educational 6141
detritus (More at PARTICULATE MATTER ...)
off cliffs; Ligurian Sea; benthic communities 4882
developing countries (See also technology transfer, Third World, world- ...)
oceanography, history of scientific and technical assistance; global commons 4357
development: sustainable
coastal zone 4981
Devonian
-Carboniferous; U.K., offshore, Clair area; sedimentation, changing provenance 5317
diagenesis
Spartina, alterniflora, belowground biomass; sediments, marsh 4082
shallow-burial; Bahamas; carbonates 4665
early, during; sulfur, reactions 4671
carbonate sediments 4675
diagenesis: sediment
porosity, changes 4666
North Sea, Fulmar Reservoir sandstones; oil, emplacement effects 6443
early; Okhotsk: Sea of, Paramushir gas hydrate seeps; Bivalvia, Conchocoele community; food chains 6480
DIANAUT
program; boreholes, DSDP; lithosphere 5240
diapirism
mud; Colombia, Caribbean margin; sedimentation, fan; faulting, strike-slip 5433
topography 6432
diapirs (More at LITHOSPHERE ...)
diatomaceous ooze (More at OOZE ...)
diatoms (More at FLORA ...)
drawing them 3796
rhizosolenid, massive fluxes; a common occurrence? 4312
loss of; plankton blooms, spring 4831
and associated bacteria; Skeletonema, costatum; tin, butyltins; degradation, and biosorption 4956
Ross Sea; silicon, role; nutrients, limitation 5487
Phaeodactylum, tricornutum; iron, limitation effects; photosynthesis 5566
communities; tide pools, intertidal height effects 5567
dichlorodiphenyltrichloroethane (Use DDT)
dichlorophenyl dimethylurea (Use DCMU)
Dictyotales
Bermuda; macroalgae, deep-water; photosynthesis 5564
differential equations
unstable second order, of neutral type; criterion of oscillation; in Chinese, English abstract 6093
diffraction tomography
seismic tomography 3525
diffusion (See also double diffusive convection; more at FLUID DYNAMICS ...)
advection; averaging method in nearly time-periodic problems 4331
advection; fluid dynamics; moment conservation method .. 4549
diffusion: chemical
estuaries, and bays; analog model 5607
diffusion: double
interleaving; density, ratio, importance 6225
diffusion: turbulent
channel flow; models 5724

diffusive interfaces (More at INTERFACES ...)
diked marshes
flooding, prolonged, effects of; invertebrates, nectonic 3750
dikes (Use dykes)
dimethylsulfide
Weddell Sea, surface and bottom water 4036
and dimethylsulfoniopropionate; dynamics in water samples ... 4642
dimethylsulfoxide; precipitation; seawater; trace analysis .. 5792
dimethylsulfoniopropionate
DMSP, possible biological role; epontic algae 4212
Dinoflagellata
Cretaceous-Tertiary boundary; calcareous nannofossils; sea level, changes, response to 4115
North Pacific, subarctic; Gymnodinium, sp., growth and grazing rates 4232
cyst, biostratigraphy; North Atlantic; Rockall Plateau; fossil record 4705
flagellates; feces production 4833
Argentine Sea; Gyrodinium, cf. aureolum; blooms, unusual 4858
cysts; sea ice, Antarctic 4935
toxic; toxicities; bacteria, are they involved? 4938
Cretaceous-Tertiary boundary, stratigraphy across; Israel; calcareous nannofossils 5322
toxic; Canada, Atlantic coast; Prorocentrum, lima 6067
toxic, associated with; ciguatera; effects of T, S, and light intensity 6068
dinoflagellates (Use Dinoflagellata)
Diomedea
exulans, satellite tracking; South Atlantic; seabirds, wandering albatross 4901
Diopatra
ornata, population ecology; Polychaeta, ecotone; drift kelp, role 6041
dioxins
chlorinated, and related compounds; toxic chemicals 4337
dioxins: chlorinated
and related compounds; symposium 3820
discharges: radioactive
Fucus, vesiculosis, as bioindicator; model of accumulation and time-integration 4945
discharges: waste
liquid; North Sea, coastal waters; environmental impact .. 3827
Discocyclina
Foraminifera; fossil record 5350
discontinuities
associated with; spreading centers; basalts; magnetization, highs 3621
discontinuities: seismic
520-km; mantle, upper 4145
Hawaii, beneath 4775
subduction zones, thermal structure 5434
Discoramulina
bollii; Foraminifera; morphology, ecology, biogeography ... 5558
disease
human, as cause of; estuarine bacteria; ecology reviewed ... 4270
diseases: fish
North Sea; pollution; review 5581
dispersal: larval
coral reefs, geomorphology; currents, prevailing 4081
dispersal: mud
Amazon Plume 5273
dispersants
Gastropoda, effects on; oils; intertidal zone; in Korean, English abstract 6507
dispersion (More at FLUID DYNAMICS ...)
dispersion: tidal
role; estuaries, and bays 6194
disposal: carbon dioxide
deep-ocean injection 6138
disposal: sulfur dioxide
seawater, in; proposal, discussion 6515
disposal: waste
sewage sludge 3823
South Africa, Durban; impact of liquid discharges 4319
sewage sludge; England, NE coast; sediments, trends; benthos, trends 5612
dissolution: calcite
seawater 6280
dissolution: carbonate
sediments, influence on radiocarbon ages; dating, carbon ... 3573
North Atlantic, Davis Strait; sediments 5847
diversity
estimation; species richness, deep-sea 4887
diversity: biological
potential anthropogenic effects 4963
diversity: ecosystem
new index 4193
diving (See also narcosis, decompression sickness, excursion tables, HABITATS ...)
diving physiology
health, medical problems associated; review article 3819
DMSP
possible biological role; dimethylsulfoniopropionate; epontic algae 4212
Dnepr River
via; Black Sea; Chernobyl fallout 4624
dolomites
synsedimentary detrital; Australia, S, Lacepede shelf; carbonate sediments 4091
dolphins
bottlenose; Cetacea; locomotion, swimming, wave-riding ... 6010
domes (More at LITHOSPHERE ...)
Doppler sonar
precision improvements 5016
double diffusion
interleaving; density, ratio, importance 6225
downwelling fronts (More at FRONTS ...)
drag
geostrophic, coefficients; sea ice, over 3960
dredging (More at SAMPLING, MINING ...)
drift
waves, velocity field beneath 5599
drift currents (More at CURRENTS ...)
drift kelp
role; Polychaeta, ecotone; Diopatra, ornata, population ecology 6041
drift: longshore
Florida, NW; Alabama, SE; sediments, multiple sources .. 5845
drift plastics
pollution hazards; conservation islands 5606
drilling (More at INDUSTRY, SAMPLING ...)
drilling rigs (More at RIGS ...)
drogues (More at OCEANOGRAPHIC APPARATUS ...)
droplets (More at AEROSOLS ...)
droplets: spray
sea salt; measurements 5780
drought
sub-Saharan, associated with; Atlantic, tropical; air-sea interface, patterns 5140
drugs (See also antibiotics, pharmacognosy ...)
DSDP (See also IPOD, JOIDES ...)
dumping (More at WASTE DISPOSAL ...)
dumping: ocean
North Sea 3828
dunes (More at COASTS, SANDS, ...)
dust (More at AEROSOLS, SEDIMENTS ...)
Saharan, effects; remote sensing, temperature measurements . 4381
dust: atmospheric
concentrations; Asia, E, over; North Pacific, remote, over .. 6268
dust: eolian
Mediterranean Sea, W, over; aerosols, optical thickness ... 3987
Dutch Wadden Sea
Phaeocystis, colonies; water column, wintering in? 5460
sea breezes 6258
dyes
rhodamine-B detection; seawater; new cross-correlation algorithm 6510
dyke<s> (More at IGNEOUS- ...)
dynamic topography
geoid, anomalies; mantle plumes; convection structures, applications to Earth and Venus 3659

Earth (See also asthenosphere, core, crust, expanding Earth theory, LITHOSPHERE, mantle, tectosphere ...)
Mars; Venus; planetary tectonics, structures 6444
Earth history
paleoclimate; stability of the astronomical frequencies 4106

Earth orbit
forcing by; sedimentation, rhythmicity; geological record . 6339
Earth rotation
polar motion; relationship 3620
tidal friction; history of science 4352
tides, slowing effect 4440
earth science
plasma spectrometry; symposium 3528
earthquake seismology (More at SEISMOLOGY ...)
earthquakes
great thrust; plate boundaries, along, aseismic slip; subduction zones, Makran (Iran, Pakistan) 3653
source mechanisms; crust 3667
underthrusting; subduction zones; moment release, depth distribution 3670
as record; tectonic stress; plate boundaries, Eurasia-Africa 4134
micro-, activity; Red Sea, Suakin Deep; tectonics, implications 4159
focal mechanisms; Aegean Sea 4161
source mechanisms; seismotectonics; crust 4167
Mariana, 1990; tsunamis, abnormal propagation 4456
great, possible precursors; Alaska, Peninsula region 4767
locating 4768
micro-; Mid-Atlantic Ridge; seismicity, characteristics ... 4769
migration along; North Pacific, W; subduction zones 4776
great, and slip rate; San Andreas Fault; faults 4784
surface wave amplitudes; Philippines, July 1990 4793
Mariana, 1990; subduction zones 4796
seismicity; plate boundaries 5417
tsunamigenic; tsunamis 5429
frequency, cyclicity; seismic gaps, hypothesis 5627
recurrence intervals; Holocene; Alaska, Cook Inlet 5880
1989; Macquarie Ridge; faults, reactivation 5944
Russia, off Primorskij, 1990 5954
deepest, beneath; Kuril Arc; Mariana Arc; mantle, high-velocity zones 5955
1979 Ito, rupture process; volcanism, submarine eruptions, preceding 5960
statistics, synthetic seismicity; Middle America Trench 5961
source mechanisms; Philippines, Luzon, 1990 5963
California 6136
Afar, 1989 sequence; tectonics, implications; rift zones 6386
thrust-type; subduction zones; seamounts, asperities; physical model for rupture 6413
Lesser Antilles, Arc, 1981-88; seismicity, shallow; subduction zones; in French, English abstract 6419
small; tectonics, force distribution 6421
deep focus; martensitic transformations as possible mechanism . 6423
depth extent of rupture; Chile, outer rise, 1981 6435
Hawaii; seismic gaps 6439
East African Rift
system; Kenya, Rift, northern; tectonics, evolution 5382
Red Sea Rift; Afro-Arabian Rift, system 5445
East China Sea
Ryukyu Islands, E of; currents; Kuroshio 5677
water masses; mixing, characteristics 6188
winter dense water; water masses, formation and evolution .. 6191
Cenozoic, spore-pollen assemblages; shelf sediments 6367
East Pacific Rise
hydrothermal plumes 3568
rates of accumulation on; sediments, metal-bearing 4094
Pacific-Cocos-Galapagos junction; plate boundaries, triple junctions (RRR); spreading ridges 5912
magma chambers, processes, petrology 5923
evolution; mid-ocean ridges 5941
12°N; seismic tomography; spreading center, imagery ... 6410
East Sea Intermediate Water
Korea, Ulleung Basin; water masses; in Korean, English abstract 5051
easterlies (More at WIND(S) ...)
Echinodermata
Great Barrier Reef; Acanthaster, planci, reproduction, recruitment and hydrodynamics; predation, by crown-of-thorns starfish 6491
Ecklonia
radiata; kelp beds; fauna, on holdfasts; monitoring the shallow sublittoral 4959
ecological modelling
North Sea 4820
ecology (See also altruism, biogeography, biological-, colonization, competition, environment, HABITATS, niches, refuges, symbiosis; more at BIOLOGY ...)
ecology: benthic
North Sea, symposium papers 6471
ecology: microbial
hydrothermal sediments 6484
ecology: plankton
stochastic geometry, applications 6447
economics: fisheries
mathematical bioeconomics 3834
ecosystem diversity
new index 4193
ecosystems (More at MICROECOSYSTEMS ...)
effects on; Caribbean area; hurricanes 4185
Caribbean area; hurricanes, responses to; plants; animals 4192
structure; Southern Ocean; sea ice, role 5971
ecosystems: aquatic
toxins, vinyl chloride, stability analysis; biota 5576
ecosystems: estuarine
Chesapeake Bay; plankton; nitrogen, N-15, rapid storm-induced changes 3720
ecosystems: eutrophic
carbon, budget; sulfur, metabolism, role; sediments, dynamics 4646
ecosystems: pelagic
stressed; North Sea; plankton 3729
nutrients, episodic inputs; atmosphere, from; role in chemical and biological dynamics 3950
grazing, role; nutrients, -rich areas 5471
ecosystems: shelf
modelling 5622
ecotoxicology
and biogeochemistry; mercury, in the marine environment; in French, English abstract 3821
ectocrines (More at ORGANIC COMPOUNDS ...)
eddies (More at CURRENTS ...)
baroclinic; Sargasso Sea; surface temperature; westward-propagating anomalies 3275
Agulhas Retroflection; flow, time-dependent 3276
North Atlantic, NW; circulation, mean 3281
cyclonic; Mexico: Gulf of; Campeche: Bay of; in Spanish and English 3295
formation, evolution; sea ice, beneath 3339
flux; geostrophic flow; fluid dynamics; current meanders 3389
evolution, kinematics; Loop Current; Mexico: Gulf of ... 3874
lower continental slope; Mexico: Gulf of 3875
remote sensing; literature study of recent observations 3876
lens-like; flow, path forecasting 3879
warm-core, evolution; Kuroshio 3919
intrathermocline; Mediterranean Sea, water; lenses, formation and evolution 4426
structure, water types; rings, warm-core, 86B 4430
rings, genesis; heat transport, related 4528
model; rings, structure 4531
Gulf Stream; Kuroshio; rings, warm-core; workshop collection 4968
Rose Spit; British Columbia, Dixon Entrance 5038
model; sensitivity to resolution, friction 5105
formation; seamounts, over; stratification, conditions; Taylor caps 5106
warm, over; clouds, arc-shaped band 5157
warm-core; Mediterranean Sea, E; nutrients, dynamics, new production 5204
solitary, almost symmetric; fluid dynamics 5733
wind-induce motion; Saint Lawrence Estuary 6168
contributions; Southern Ocean; momentum flux 6169
formation; Okhotsk: Sea of, Kuril Basin; circulation 6174
formation kinematics and structure; Black Sea, central 6228
morphometric; calculation method 6230
eddy heat flux
hemispheric teleconnections 4590
edge waves
beaches, sloping; uniform asymptotics 5077
Eel River Basin
Gorda Plate; subduction zones; crust, deep structure 4782
eelgrass (More at FLORA ...)
importance; Arcachon Basin; Zostera, noltii; heavy metals, budget; in French, English abstract 6063
eelgrass beds
Zostera, marina; nitrogen, dynamics; high growth, low nutrient period 5565
eels
European silver, migrating, from; PCBs, possible loss of 4315

effluent (More at WASTE ...)
eggs
production; Crustacea; reproduction 4927
Egypt
sediments, short core, geochemistry; Alexandria 3506
Alexandria, harbor; anthropogenic pollution 4045
NW Nile Delta; Quaternary, Late; margin sediments; terrigenous-carbonate interface 4076
the 1150 B.C. Turin Papyrus; maps, geological, world's oldest . 5621
Eilat: Gulf of (Use Elat: Gulf of)
El Niño
monitoring; acoustic tomography, modal 3383
California: Gulf of; evidence in 1889 cruise records; in Spanish and English 3426
Pacific, W equatorial; surface wind 3442
extremes, associated with; Europe; climate, anomalies 3943
ENSO LF changes; atmospheric oscillations 3953
ENSO; snow, cover, Eurasian; monsoons, Indian; relationships, synthesis 3956
ENSO origin modelled; Pacific, western 3958
2-yr and 1-yr; ocean-atmosphere interactions 3964
extremes, during; Northern Hemisphere; circulation, regimes 3966
signals; electron spin resonance dating; corals 4056
ENSO events, effects; Pacific, W tropical; phytoplankton, distribution, abundance 4196
winter; weather forecasting, long-range; first successful forecast; report 4373
Quasi-Biennial Oscillation; ocean-atmosphere interactions 4567
1935-46; Rossby waves 4569
stratospheric oscillations, QBO 4586
physical and biological effects; Pacific, E tropical, 1986-89 ... 4997
Southern Hemisphere, autumn 1991; climate, seasonal summary 5129
Southern Oscillation, and ENSO; ocean-atmosphere interactions; history of the terminology 5134
ENSO simulations; circulation, general; ocean-atmosphere interactions 5141
ENSO simulations; Pacific, tropical; circulation, general ... 5145
ENSO anomaly mode development; Pacific; ocean-atmosphere interactions 5151
1986/88 to La Niña 1988/89; Pacific, equatorial; carbon dioxide, in and over ocean 5164
20th century events; Santa Barbara Basin; sediments, laminated 5330
and La Niña, effects; Pacific, equatorial; seabirds, assemblages 5519
ENSO events; climate, prediction; report 5628
development, during; Pacific, W tropical, over; atmospheric temperature, structure; in Chinese, English abstract 5735
Pacific, W; equatorial precipitation; rainfall 5761
ENSO, relationship; tropical storms, formation 5767
Quasi-Biennial Oscillation; Southern Oscillation; stratospheric ozone, Dobson records 6237
mature phase 1982-83; Pacific; Indian Ocean; surface heat, balance 6253
1986-89 ENSO cycle; Pacific, W; atmospheric circulation . 6255
Elat: Gulf of (See also Aqaba: Gulf of)
Elbe Estuary
during a tidal cycle; carbohydrates, dissolved and particulate 4016
electric cables (More at CABLES ...)
electric field
variations; seismicity, perturbations; seabed 3913
electromagnetic field
bias; waves, small-wave modulation 3914
seafloor, lateral anisotropy 4726
electromagnetic sounding
seafloor 4724
electromagnetic waves
reflection at sea surface 6085
electron microscopy (More at MICROSCOPY ...)
electron spin resonance dating
New Zealand, Rotoiti Breccia (Taupo volcanic zone) 4052
thermoluminescence dating; seminar proceedings 4053
corals; El Niño, signals 4056
elements (See also actinides, metals, radionuclides, rare earths ...)
fractionation; air-sea interface, transfers at 3455
distribution; aerosols, generation; flotation, processes, effect 3988
associations; sedimentation, oceanic, cycles 3997
chemical species, reactivity; Mediterranean Sea; aquatic environments; symposium 3998
dissolved; World Ocean; geochemical system 4039
concentration series; sediments 4090
24, concentrations; North Atlantic, NW; Thunnus, thunnus; tuna, bluefin, in 4948
composition; Antarctic Peninsula; aerosols 5168
concentrations; Turkey, River Goksu and Tasucu Delta; sediments 5234
depositional chemistry; chert, interoceanic variation; sediments 5862
frequency distributions, correlations; biota, aquatic 6078
major; Southern Ocean, Indian sector; nutrients; plankton biomass 6132
availability, electron configuration; biota, molal concentrations in 6305
elements: trace
Black Sea, over; aerosols, composition 3454
natural waters; cathodic stripping voltammetry 3474
sorption; Rhone River; suspended matter, surface reactivity; relations 4025
San Francisco Bay, Estuary 4046
and mineral matter; Yellow Sea, inputs to; aerosols 4611
Tasmania, Macquarie Harbor; humic matter; organic matter, sedimentary; chemistry 5216
Bermuda, and Barbados; aerosols 5774
embayments
frictionally-dominated; tides, signal diffusion 5058
emersion
rates, spatial model; France, Bay of Mont Saint-Michel; intertidal zone; in French, English abstract 3744
Emiliania
huxleyi; Coccolithophoridae; presence of vaterite and aragonite in coccoliths 3797
emissions: volcanic
carbon dioxide; atmosphere, contributions to 5407
Ems Estuary
Netherlands; flow, tidal and residual 3872
endangered species
tracking; sonic, satellite, and radio telemetry techniques 5007
sea turtles, Kemp's ridley 5616
Endeavour Ridge
scattering layers, deep; hydrothermal plumes, associated with 3569
energy (For man-made systems see also POWER ...)
exchanges; ice, freshwater, indentation tests 3360
energy budget: surface
Pacific, W tropical; atmospheric convection, deep; precipitation, associated, effects 6256
energy flux
density estimation; sea ice, over 3362
mixing, processes; circulation, vertical, and internal tides ... 4398
Bengal: Bay of; air-sea interface; atmospheric boundary layer, stability 6248
energy resources
global commons; a realistic outlook 6126
energy transfer
internal waves, -vortical mode spectrum 4470
energy: turbulent
dissipation; mixed layer, upper oceanic; air-sea interactions 4577
engineering
challenges; deep-sea geohazards 3818
England
SW; Severn Estuary; Bristol Channel; sediment, fine, sources 4068
Northumberland coast; porpoises, bottlenose dolphins, wild, solitary; diary of activities June 1988 to January 1991 4873
Plymouth coast; Ciliata; productivity, summer 4928
SW, Cornish coast; Cetacea, 50 years of sightings 5501
NE coast; sediments, trends; benthos, trends; waste disposal, sewage sludge 5612
SW; denitrification, rates; marshes, salt, fringing; mud flats 5822
English Channel
manganese, adsorption on calcareous surfaces; seasonal variations, implications 4007
Copepoda, feeding and grazing rates; spring blooms, Phaeocystis-dominated 5975
sediment communities; carbon, organic, flows, flux 6014
Eniwetok Atoll
atoll sediments 4663
enteroviruses (More at viruses ...)

entrainment: zooplankton
Sweden; power plants ... 4951
environment (More at ECOLOGY ...)
environmental conservation
North Sea, coastal and estuarine zones ... 3831
environmental impact
North Sea, coastal waters; waste discharges, liquid ... 3827
Persian Gulf; Kuwait, and environs; war, aftermath; remote sensing data sets ... 3830
environmental impact assessment (See also impact assessment ...)
environmental management
marine; decision making ... 4984
environmental monitoring
Norwegian Sea; nuclear submarines, sunken ... 4973
Europe; programs prematurely terminated ... 5000
Hudson Bay; Raritan Bay ... 5590
environmental politics
commonsense and the precautionary principle ... 5615
environmental protection
species and ecosystems; Caribbean Sea; international laws 4983
North Sea; international law ... 4986
Arctic area; international law ... 5617
environments: aquatic
Mediterranean Sea; elements, chemical species, reactivity; symposium ... 3998
environments: bathyal
New Caledonia, off; in French, English abstract ... 5513
environments: pelagic
Foraminifera, planktic, diversity as indicator ... 5900
enzymes
5'nucleotidase activity; bacterial metabolites ... 4264
production; bacteria, after starvation ... 5523
Eocene
Early; polar warming, possible; methane, as cause ... 5893
earliest; Paleocene; North Atlantic, Biscay Gulf, paleoceanography; sediments, biostratigraphy; fossil record; in French, English abstract ... 6364
Eocene-Oligocene boundary
magnetic field, polarity time scale; Ar-dating, magnetochronology ... 5361
eolian dust (More at DUST ...)
Mediterranean Sea, W, over; aerosols, optical thickness ... 3987
epibenthic invertebrates
scavengers, behavioral ecology ... 6042
epibenthos (More at BENTHOS ...)
epifauna (More at FAUNA ...)
mobile, distribution patterns; Tasmania, Bathurst Harbour Estuary, rope fiber habitats ... 3740
ascidians; Florida; Ascidiacea; early post-settlement mortality ... 5506
lake macrophytes; phytoplankton ... 6058
mobile; Australia, W; seagrass beds; colonization, patterns ... 6469
epiphytes
can herbivore preferences explain distributions?; Agarum, fimbriatum, on; Bryozoa, Lichenopora sp. ... 3739
Maine: Gulf of; host-epiphyte interactions; variation along a wave exposure gradient ... 3794
epontic algae
dimethylsulfoniopropionate; DMSP, possible biological role ... 4212
Antarctica, ice-covered area near Syowa Station; productivity; phytoplankton ... 4228
Canada, Chesterfield Inlet; ice, microalgae, seasonal development ... 4313
McMurdo Sound; evidence for nutrient stress during the spring bloom ... 4937
equator
near; turbulence, does it peak there? ... 3392
equatorial circulation ... 5028
equatorial precipitation
Pacific, W; rainfall; El Niño ... 5761
Equatorial Undercurrent
circulation; currents, model ... 5032
equatorial upwelling (More at UPWELLING ...)
equatorial waves (More at WAVES ...)
equatorial westerlies (More at WESTERLIES ...)
erosion (See also bioerosion, slumping, weathering ...)
and consolidation; Chesapeake Bay; cohesive sediments . 3549
and thermal uplift; Exmouth Plateau; continent-ocean boundaries ... 4777
sediments, cohesive ... 5268
timing; Bahamas, eastern escarpment; stable oxygen isotopic composition ... 5323
resistance, prediction; muds; sediments ... 5855
erosion: coastal
catastrophic; Australia; tsunamis, 105 kya ... 4703
eruptions: submarine
volcanism, Macdonald Seamount, 1989; gas-rich exhalations . 3640
eruptions: volcanic
climatic effectiveness; discussion ... 3423
Iceland, Hekla, 1991 ... 4746
Mount Pinatubo, Philippines, 1991; stratosphere, effects; climate, effects ... 4750
Mount Pinatubo, 1991; basalt trigger? ... 4753
Alaska, Katmai, June 1912; geophysical and geochemical observations ... 5399
ESR dating
Quaternary; sediments, deep-sea, core RC17-177 ... 4058
corals ... 4061
estuaries (More at COASTS ...)
suspended matter; particles, size ... 3501
circulation, model ... 3866
titanium, dissolved ... 4622
U.K.; heavy metals; sediments, bioavailability, accumulation, effects in; review ... 4943
circulation; marshes, salt ... 5025
macrotidal; sewage, influence; fatty acids, and sterols ... 5232
and bays; chemical diffusion; analog model ... 5607
shallow; irradiance, variable, effects; phytoplankton, productivity ... 5989
and bays; tidal dispersion, role ... 6194
sediment transport; shelf; modelling exchanges ... 6334
estuaries: hypoxic
ventilation, artificial, passive; feasibility study ... 4336
estuaries: stratified
Hudson Bay, Manitounuk Sound; solitons; mixing, and internal hydraulics ... 6227
estuaries: tropical
salt balance; tides, and discharge events, during ... 6163
estuaries: turbid
light, diffuse attenuation coefficient ... 3369
estuarine bacteria
disease, human, as cause of; ecology reviewed ... 4270
estuarine beaches
New Jersey, site-specific controls on processes; wind; waves 4073
estuarine circulation (More at CIRCULATION ...)
estuarine communities
Portugal, Tagus Estuary; trophic dynamics ... 6481
estuarine ecosystems
Chesapeake Bay; plankton; nitrogen, N-15, rapid storm-induced changes ... 3720
estuarine flow
residual; Spain, Ria of Vigo ... 6172
estuarine flushing
Ciliata, avoidance by; Mesodinium, rubrum ... 5553
estuarine inlets
mouth closures; Decapoda, larval exchanges across; implications of anthropogenic changes in frequency and duration of closures ... 4982
estuarine sediments
strontium, isotopics; paleoclimate, and -salinity ... 3590
bacteria, activity ... 3755
Virginia, James River Estuary, facies model ... 4099
ethics (More at ACADEMICS ...)
Ethiopia
Afar triangle; triple junctions; tectonics, evolution ... 3626
Afar, evolution; Tadjoura: Gulf of, evolution ... 4130
Ethiopian Rift
Red Sea; Aden: Gulf of; crust, kinematics and deformation; tectonics, since the Oligocene; in French, English abstract ... 6381
Euchaeta
antarctica, feeding; Antarctica, waters around; Copepoda, carnivorous ... 4293
Eudactylina
2 n.spp., 1 n.record; Copepoda, eudactylinid ... 4296
eukaryotes
photosynthetic; Sargasso Sea, biomasses in; bacteria; cyanobacteria; prochlorophytes ... 5481
evolution, early; geological perspective ... 5588
Euler equations
fluid dynamics; hydrostatic pressure ... 4545

compressible ... 6088
Eulerian streaming (More at FLUID DYNAMICS ...)
Eunice
genus reviewed; Polychaeta ... 4911
Euphausia
superba, seasonal growth and mortality; South Shetland Islands, Admiralty Bay; krill ... 4290
superba; krill, Antarctic; marginal ice zone ... 4919
Euphausiacea
biology, biogeography; Red Sea; in French, English abstract . 3775
Southern Ocean; krill; spawning, season ... 4291
Algoa Bay; Nyctiphanes, capensis; krill, distribution, biomass ... 6047
euphotic zone
nutrients, -rich, maintenance; physical processes ... 5202
Eurasian Basin
Greenland Sea; sea ice ... 5092
Europe
Mesozoic; Arctic area; seaways, structural foundation and evolution ... 3578
Meliata-Hallstatt ocean evolution; Alps, E; Carpathian Mountains, W; significance for early development ... 3595
NW; Cenozoic, geology; margin sediments, and adjacent deep-sea ... 3679
climate, anomalies; El Niño, extremes, associated with ... 3943
seas around; wave climate, variations ... 4573
environmental monitoring; programs prematurely terminated ... 5000
remote sensing, programs; meteorology and climatology ... 5123
extreme events; climate, variability ... 5131
W, estuaries; suspended matter; particle size, distributions 5207
W, estuaries; suspended matter; particle size; flocs, formation and breakup ... 5208
remote sensing, program achievements ... 5591
achievements; remote sensing ... 5594
marine environment; remote sensing, programs ... 5597
science; collection ... 5619
U.S.; Japan; international politics; global commons; groping for new definition of roles ... 6520
European Economic Community (Use E.E.C.)
europium
anomalies; crust, thermal history; sediments, banded iron formations ... 6414
Eurytemora
affinis, status studies; Calanoida ... 3774
Eurythenes
gryllus; Amphipoda, deep-sea; stable elements and Po-210 .. 3781
eustasy (More at SEA LEVEL ...)
eutrophic ecosystems
carbon, budget; sulfur, metabolism, role; sediments, dynamics ... 4646
eutrophication (More at TROPHIC DYNAMICS ...)
Mexico, Cancun; oxygen, dissolved, diel dynamics; lagoons, tropical ... 4011
corals, juvenile, effects on; sedimentation ... 4258
Riga: Gulf of; zooplankton, changes ... 4846
North Sea, coastal zones; Phaeocystis, sp. blooms ... 4861
paradigm; Baltic Sea, Kiel Bay; oxygen, deficiency increasing; hypoxia ... 5568
Baltic Sea, Kiel Bay; benthic communities; hypoxia 5582
nutrients, concentration scales; oligotrophy; evaluation 6114
Kattegat, SE; carbon, budget and energy flow ... 6445
evaluation research (More at RESOURCE MANAGEMENT ...)
evaporation
salt flux ... 3397
reduction, due to; pycnocline, shoaling; sapropels, formation 4699
parameterization, sensitivity to; tropics; ECMWF model 5172
Trieste: Gulf of; heat flux; air-sea interactions ... 6247
evapotranspiration
tidal marshes ... 6025
evolution (See also selection, origin of life and speciation; more at BIOLOGY ...)
extinction; biased trends ... 3807
fossil record; vertebrates, history ... 4706
changes; population dynamics, entropic effects; growth rate ... 5587
early; eukaryotes; geological perspective ... 5588
Exclusive Economic Zone (Use EEZ)
excursion tables (More at DIVING ...)
Exmouth Plateau
continent-ocean boundaries; erosion, and thermal uplift . 4777
Indian Ocean, adjoining basins; geomagnetic field ... 6369
exotic species
fish introductions, ecological and genetic implications ... 4328
exotic terranes
Mesozoic; North America, W; marginal seas ... 4735
expanding Earth theory (More at TECTONICS, EARTH...)
expert systems
phytoplankton; taxonomy ... 4237
exploration (More at prospecting ...)
exploration geology
hydrocarbons, indicator techniques; gas; oil; annual geophysical report ... 4801
exploration: petroleum
Red Sea; Aden: Gulf of; hydrocarbons; methodology of regional cooperation ... 5441
exploration seismology
North Sea; hydrocarbons ... 4172
explosions (More at SOUND ...)
extension: lithospheric
post-collision; Indonesia, E; collision tectonics, arc-continent; discussion ... 3632
extensional tectonics
Andaman Sea; possible stress model ... 4728
Baltimore Canyon, Trough ... 5379
extinction (See also catastrophism, EVOLUTION ...)
evolution; biased trends ... 3807
in danger of; Hawaii, last refuge; seals, monk ... 3843
direct and indirect; Cretaceous-Tertiary boundary; impact hypothesis; report ... 4375
and origination, declining rates; fossil record ... 4707
Phanerozoic; impact hypothesis ... 4708
low rate; Cretaceous-Tertiary boundary; Foraminifera, benthic ... 5352
Paleogene; Foraminifera; population dynamics ... 5353
Paleogene; Foraminifera, planktonic; fossil record, survivorship analysis ... 5902
extinction: mass
Triassic-Jurassic boundary; bolide impacts, Manicouagan; dates incompatible ... 3588
Cretaceous-Tertiary boundary; comet impacts, multiple; report ... 3841
Permian-Triassic boundary; catastrophism ... 5010
extratropical teleconnections
wavelike; Southern Hemisphere ... 3974
extreme value data
engineering analysis, models ... 6104
Exxon Valdez
bacteria, marine; hydrocarbons, interactions with; oil spills 3799
oil spills; petroleum, detection via TM signature ... 5613
oil spills; pollution bioremediation ... 6118

fallout (More at nuclear waste, RADIOACTIVE MATERIALS ...)
fallout: Chernobyl
Baltic Sea; Fucus, vesiculosus, radioactivity ... 4314
Black Sea; Dnepr River, via ... 4624
fan sediments
Mexico: Gulf of; sonar, backscatter variation ... 4674
fold belts; Mexico: Gulf of; Mississippi Fan ... 4679
Mississippi Fan; structural geology, evolution ... 5868
fans: deep-sea
classification; submarine channels, geometry ... 6322
fast ice (More at ICE ...)
Fastnet Basin
Triassic, and Lower and Middle Jurassic; Ireland, SW, off; sediments, stratigraphy ... 4112
fatty acids
and sterols, as biomarkers; Black Sea; particulates, source, alteration processes ... 3505
and sterols; estuaries, macrotidal; sewage, influence ... 5232
occurrence, significance; bacteria, methane-utilizing ... 5531
fault zones
transform, Malloy; Norway-Greenland Basin; mid-ocean ridges ... 4141
Mentawai; Sumatra, off; tectonics, geodynamics ... 4759
crust, motion; positioning systems, GPS ... 4762
slip rate, strength variations; San Andreas Fault, system 5426
Blanco Transform morphology; North Pacific, E; tectonics, evolution ... 6379

Quaternary, Late; New Zealand, South Island, Australian-Pacific plate boundary; plate boundaries, slip across . 6382
faulting
transcurrent, from; Caribbean Plate, N boundary; subduction, frontal, to 4729
dyke-induced; subsidence, graben; rift zones, volcanic, in .. 4789
strike-slip; Colombia, Caribbean margin; diapirism, mud; sedimentation, fan 5433
faults
small, extension; North Sea, example from the Viking graben . 3661
strike-slip, parallel to; Iceland, and the Afar depression, evidence from; spreading centers, axes 4162
structure; Tertiary; Pleistocene; Iceland 4761
San Andreas Fault; earthquakes, great, and slip rate 4784
transform; Dead Sea Rift, and El Pilar Fault; basins, extensional, asymmetric 5411
transform; Cayman Trough; mapping; discussion 5416
Garrett transform; South Pacific; volcanism; crust; mantle, exposed 5423
reactivation; Macquarie Ridge; earthquakes, 1989 5944
evolution; San Andreas Fault 5956
strike-slip; Oregon, margin, off, Secoma Fault 6405
salt-related listric growth; North Sea, Danish; displacement history, salt kinematics 6431
fauna (See also crypto-, epi-, in-, macro-, meio- and microfauna; deposit feeders, invertebrates, tube dwellers; more at ORGANISMS ...)
composition; hydrothermal fields 3743
passive transport; bedload transport; intertidal zone, sandflats 4072
seagrass beds; ice rafting, recovery after 4254
on holdfasts; Ecklonia, radiata; kelp beds; monitoring the shallow sublittoral 4959
sharp decrease in number of species; China, Kiaochow Bay; baseline 5583
associated; North Atlantic, Faroe shelf; Scleractinia; Lophelia, pertusa; corals, bank-forming, deepwater 6473
composition, abundance, biomass; New Jersey, S; marsh creeks 6478
fauna: abyssal
Mediterranean Sea, and Atlantic species 4883
bottom currents, strong 4886
studies; North Atlantic; submersibles 6470
fauna: abyssopelagic
North Pacific, central 5500
fauna: benthic
hypoxia, tolerance 4893
Mediterranean Sea, shallow; evidence of disturbance 4897
India, E coast, Kakinada Bay and backwaters 6019
fauna: demersal
Angola, shelf, slope 6006
fauna: vent
Japan, elemental compositions; seep communities; in Korean, English abstract 6474
Okinawa Trough, Mid-; stable isotope ratios 6475
Pacific; Ostracoda 6500
faunal associates
Southern California Bight; Cnidaria, scyphozoan; Chrysaora, sp. 3745
fecal pellets
Weddell Sea; Scotia Sea; krill; particle flux, role in 5813
copepod; Canada, E coast; particulates; chemical compositions compared 5814
feeding
effects on; North Sea; Clupea, harengus; herring, larval, infection by helminth parasites 3735
feldspar
extracts; flocculation, processes, implications for; grain size, distributions; quartz, extracts 3542
ferromanganese crusts
Hawaiian Archipelago; rare earths, geochemistry 4807
growth rate; Atlantic; Romanche Fracture Zone 4810
ferromanganese nodules (More at NODULES ...)
sediments, surrounding 4174
shape characteristics 4175
Guatemalan Basin, S 4176
Mid-Pacific Mountains 4805
Pacific; Clarion-Clipperton Fracture Zone 4808
Clarion-Clipperton Fracture Zone 5443
fertilization
Southern Ocean; iron; productivity; possible biogeochemical consequences 5220
atmospheric carbon dioxide; iron 5225
experiments; Southern Ocean, Weddell-Scotia seawater; iron; manganese; plankton, communities, effects on .. 5459
design of small-scale experiment; iron 5498
fetch
with; Japan: Sea of, during winter monsoon; wind waves, growth 3309
Fiji
algae; notes, distribution records 4931
geological evolution; mineral deposits 5301
filaments: frontal
breakup 5111
films (More at SLICKS ...)
surface; wind waves, growth 5065
suppression by; ripples, wind-generated 5078
natural; surface tension; wave damping; wind, properties 5081
surface-active, redistribution; ship wakes 5112
surface microlayer; surfactants, properties 5181
surface pressure-area isotherms; surface microlayer 5182
surface; California, S; microbiota; amino acids, dynamics 5521
surface microlayer; slicks 5623
drift velocity; oil slicks 5828
films: bacterial
larval settlement, barnacle; inhibition investigated 4891
films: surface
slicks, formation mechanisms 3429
temperature, recording during squall conditions 3853
flow, effects; internal waves, field, in 4476
light, attenuation coefficients 4484
filtration
vortex flow; microbiota, concentration of 5525
fractionation problems; primary production, studies 5791
finestructure
3-D, spatial information; odor plumes, aquatic 3809
step-like; thermohaline inversions; water column 4537
T-S; Taiwan Strait; currents, structure 5671
fiords (Use fjords)
fires
plumes; vessels, burning oil supertanker; whirlwinds, formation 4617
postwar; Kuwait; oil smoke; atmosphere, effects 5783
First Dynamic Response and Kinematics Experiment (Use FDRAKE)
First GARP Global Experiment (Use FGGE)
First International BIOMASS Experiment (Use FIBEX)
fish
effects on; Decapoda, effects on; seagrasses, shoot density .. 4262
distribution, composition; Gulf Stream; rings, warm-core, 82-H 4875
Arabian Gulf; arsenic, levels 4941
migrating; acoustics, extinction cross-section 5097
as predators; predator-prey dyanamics; corals, soft, sclerites as defenses 5542
Antarctica; Ross Sea, Terra Nova Bay; organochlorines, PCBs, DDTs, HCB 6505
fish diseases
North Sea; pollution; review 5581
fish farming
caged, effects; mariculture; sediments, metabolism and sulfate reduction 5586
fish introductions
ecological and genetic implications; exotic species 4328
fish larvae
Johnston Atoll, distribution around; Pacific 5455
fish stocks
recruitment; North Sea; circulation 5035
fisheries
effects of commercial dragging; sediments; organic matter . 3808
mariculture; toxic blooms, effects 5608
effects on; Persian Gulf; war, 1991; preliminary report 6110
fisheries acoustics
developments; symposium 3833
fisheries economics
mathematical bioeconomics 3834
fisheries management
krill; Commission for the Conservation of Antarctic Marine Liveing Resources 4342
yield per recruit analysis; gear selectivity 4343
krill, Antarctic 4979
risk assessment; sources of uncertainty 4980
fisheries recruitment
models 5614

fishermen
subsistence; Indonesia, Jayapura; debris, anthropogenic, effects 5610
fishing nets
drift and gill; Aleutian Islands; plastic pollution; problems and solutions 4340
fission products (More at RADIOACTIVE MATERIALS...)
fjord circulation
meltwater; tidal currents 5022
fjords (More at COASTS ...)
internal tides 4474
zooplankton, mortalities; freshwater, discharges 4844
Alaska; noise, ambient 5099
seismic architecture; Spitsbergen, NW; sedimentation 5265
Norway, W; Radiolaria, fauna from sediments and plankton 6056
Fladen Ground Experiment (Use FLEX)
flagellates
Dinoflagellata; feces production 4833
numbers, volume, bacterivory; proportional distributions 4862
nanno-, pico-; Ligurian Sea, frontal areas; microbiota, planktonic; contributions to ETS activity 6488
flats (More at COASTS ...)
flats: mud
ring structures; Saint Lawrence Estuary; ice, shore, as cause 5272
England, SW; denitrification, rates; marshes, salt, fringing 5822
flats: tidal
sediments, muddy and sandy; geochemical processes 3545
flocculation
processes, implications for; grain size, distributions; quartz, extracts; feldspar, extracts 3542
flocs
density, strength; salinity, influence 3536
formation and breakup; Europe, W, estuaries; suspended matter; particle size 5208
flocs: mud
settling; turbulence, role 4088
floes
interactions; sea ice, breakup; sound; noise 4525
floes: ice
identification in satellite imagery 5713
flooding
prolonged, effects of; diked marshes; invertebrates, nectonic 3750
floor (See also ocean-, seafloor; bathymetry, bottom, relief, sediment-water interface, topography, toponymy; more at LITHOSPHERE ...)
flora (See also microflora; ALGAE, diatoms, eelgrass, fungi, macrophytes, periphyton, plants, pollen, seagrasses; more at ORGANISMS ...)
floral recruitment
Baltic Sea; Fucus, ceranoides 5561
Florida
W shelf; Cretaceous, upper, to Pleistocene; carbonate platforms, evolution 3582
Keys; Foraminifera, present distribution of soritids and peneroplids; in French, English abstract 3792
Keys; Amphipoda; Cerapus, n.sp., notes on male behavior . 4287
East Pass; inlets, migration; shoreline dynamics 5264
Ascidiacea; epifauna, ascidians; early post-settlement mortality 5506
Rookery Bay; mangroves, comparative habitat utilization in; macrofauna, by 5518
Keys; macroalgae, irradiance, salinity, desiccation effects ... 5562
S of Key West; lee waves; ADCP measurements 5708
NW; Alabama, SE; sediments, multiple sources; longshore drift 5845
Sebastian Inlet; weather, episodic, influence; currents, residual; tides 6195
W margin, past 5.4 myr; carbonate sedimentation, cyclic .. 6362
Florida Bay
phosphorus, limitation; primary production 6024
Florida Current
current transport; heat flux 4413
Florida Escarpment
development; Mexico: Gulf of; carbonate terranes, unconformities 3556
Florida Platform
circulation, through platform flank 4685
flotation
processes, effect; aerosols, generation; elements, distribution 3988
flow (See also inflow; more at FLUID DYNAMICS ...)
time-dependent; Agulhas Retroflection; eddies 3276
stable, from, in thermally-driven sea; turbulence, geostrophic, transition to 3390
oceanic; seamounts, effects; circulation 3395
currents, quasi-3-D modelling 3409
geostrophic; Southern Ocean, Ross Sea sector; temperature; salinity; vertical distributions 3857
tidal and residual; Ems Estuary; Netherlands 3872
path forecasting; eddies, lens-like 3879
viscous; fluid dynamics; Navier-Stokes equations, parabolized/reduced techniques reviewed 3935
incompressible, computations; fluid dynamics; stabilized finite element formulations 3936
quasi-geostrophic; waves, propagating; fluid dynamics, isallobaric effects 3937
subduction rates and diabatic forcing; mixed layer; relationship 4320
path; Oyashio; currents, net geostrophic transport balance; in Japanese, English abstract 4411
properties; British Columbia, Bute Inlet; turbidity currents 4422
two-layer; solitary waves, and hydraulic falls 4457
effects; surface films; internal waves, field, in 4476
steady; sediment ridges, formation; bedforms 4668
cross-equatorial; spin-up; boundary currents, western 5040
waves, formation, growth 5067
velocity; oxygen, rapid redistribution; sediments, in 5214
features; Mediterranean Sea, E, Euboikos Gulf; water masses 5678
around underwater obstacle; numerical calculation 6101
reductions; straits; bridges, effects 6103
oceanic, characteristics; Black Sea; circulation 6164
oceanic, characteristics; circulation, model 6165
straits; water masses, exchange 6167
Mozambique Channel; currents 6180
residual; California: Gulf of; tidal currents, M_2 6197
analysis; undular bores; waves 6207
flow: barotropic
strait circulation 3860
flow: channel
Korea, Keum Estuary; sediments, dispersal 5267
turbulent diffusion; models 5724
flow: convective
patterns; model driven by wind, thermal and saline forcing 3864
flow cytometry
light scattering of individual algal cells 4814
flow: estuarine
residual; Spain, Ria of Vigo 6172
flow: fluid
boreholes, DSDP 5310
flow: geostrophic
fluid dynamics; current meanders; eddies, flux 3389
Maine: Gulf of 5649
flow: heat
density; Red Sea, distribution in 4128
flow: oscillatory
sediments, beds, over; velocities and concentrations 3391
flow: shear
on; waves, stationary vortical 3307
stratified; internal waves, instability 4471
stratified; turbulence, evolution 4538
flow: stratified
topography, over; fluid dynamics 5732
flow tanks (More at TANKS ...)
flow: tidal
in; turbulence, kinetic energy hysteresis 4539
flow: turbulent
fluid dynamics 3934
flow: vertical
velocity; estimation 3852
flows: gravity
Tonga Trench, slopes, rock recycling; tectonics 3537
frontogenesis; density, non-uniform gradients; fluid dynamics 5118
flows: ice
relict stripes; Ross Ice Shelf 3325
flow-through systems (More at TANKS ...)
fluid<s> (More at FLUID DYNAMICS ...)
fluid dynamics (See also advection, CIRCULATION, CONVECTION, DIFFUSION, DISPERSION, Eulerian streaming, FLOW, FLUXES, gyres, hydrodynamics, mixing, PRESSURE, shoreline dynamics, stratification, streamwise streakiness, TRANSPORT, turbulence, vortices, WAVE DYNAMICS ...)
geostrophic flow; current meanders; eddies, flux 3389

instabilities of a Kelvin-Helmholtz velocity profile in different approximations ... 3401
stratified fluids; vorticity, lens-like ... 3403
baroclinic instability; bottom heating ... 3404
Navier-Stokes equations, regularized; analysis ... 3406
Navier-Stokes equations, regularized; analysis ... 3407
modal growth and coupling; convection, spherical ... 3926
modons, Larichev-Reznik ... 3928
Navier-Stokes equations, finite element methods ... 3929
incompressible; some important aspects and issues ... 3930
computational; pseudospectral element method, parallel implementation ... 3931
gravity currents ... 3932
turbulence, an unsolved problem ... 3933
turbulent flow ... 3934
flow, viscous; Navier-Stokes equations, parabolized/reduced techniques reviewed ... 3935
flow, incompressible, computations; stabilized finite element formulations ... 3936
isallobaric effects; flow, quasi-geostrophic; waves, propagating ... 3937
vorticity, quasigeostrophic ... 3938
Navier-Stokes equations, proof of existence of weak and statistical solutions ... 4540
convection; shear ... 4541
vorticity, baroclinic singular geostrophic; advective transport ... 4542
internal waves; Green's function behavior in a compressible medium ... 4543
internal waves, generation ... 4544
Euler equations; hydrostatic pressure ... 4545
interpretations; JEBAR; currents, field ... 4546
convection, weakly nonlinear oscillatory ... 4547
thermohaline stratification; intrusions, dynamics ... 4548
advection; diffusion; moment conservation method ... 4549
shallow water equations, Riemann problems and the WAF method of solution ... 4550
viscous, diffusive; Kelvin waves, double; properties ... 4551
turbulent friction ... 5116
mass transport, and heat; convection ... 5117
frontogenesis; gravity flows; density, non-uniform gradients ... 5118
time-dependent collapse of rotating fluid cylinder ... 5119
geostrophic instability, quasi-; momentum, wave-energy and pseudoenergy, conservation ... 5120
shallow-water equations, influences on degree of balance ... 5121
Pacific, W; buoyancy, profiles; empirical orthogonal modes ... 5728
turbulence; filtering approach ... 5729
stratified; internal waves, gravity ... 5730
thermocline ventilation ... 5731
stratified flow; topography, over ... 5732
eddies, solitary, almost symmetric ... 5733
departures from Boussinesq approximation in the Rayleigh-Benard problem ... 6231
advection-diffusion equation; finite difference approximations ... 6234

fluid exchange
jets, meandering ... 5113

fluid flow
boreholes, DSDP ... 5310

fluid muds
generation, transportability and dewatering ... 3540

fluids
flow; basalts, in; mineralization, carbonate precipitation ... 4681

fluids: borehole
chemistry; DSDP holes 395A and 534A ... 5307
chemistry; DSDP hole 504B ... 5309

fluids: cavitating
as; pack ice, modelling ... 5715

fluids: hydrothermal
chemistry; South Pacific, Fiji Basin Ridge ... 3567
quartz, solubility ... 3570
Mid-Atlantic Ridge, Oceanographer Transform; brines, Ca-rich; inclusions, plutonic rock ... 4104
chlorides, concentration, controls over ... 5877

fluids: mantle
thermal convection; numerical simulations ... 3663

fluids: stratified
rotating; line sink ... 3402
vorticity, lens-like; fluid dynamics ... 3403
currents, finestructure; conductivity microsensor ... 3849
mixing, shear ... 4532

flumes (More at TANKS ...)

fluorescence
vertical distribution; Black Sea ... 3697
data, from; Pacific, equatorial; primary production ... 3727
in seawater; organic matter, DOC ... 5189
excitation and emission spectra measurements; phytoplankton 5983
variability; Canary Upwelling; chlorophyll; organic matter, dissolved ... 6461

fluorometry (See also microfluorometry ...)

flushing: estuarine
Ciliata, avoidance by; Mesodinium, rubrum ... 5553

flushing: tidal
India, W, Amba River Estuary ... 5693

flutes (More at SEDIMENTARY STRUCTURES ...)

fluxes (More at FLUID DYNAMICS ...)

fog (More at AEROSOLS, CLOUDS ...)

Food and Agriculture Organization of the U.N. (Use FAO)

food chains (More at TROPHIC DYNAMICS ...)
studies; Saduria, entomon, gut analysis; pigments, plant, analysis ... 5970
Okhotsk: Sea of, Paramushir gas hydrate seeps; Bivalvia, Conchocoele community; sediment diagenesis, early ... 6480

food chains: ciguatera
Crustacea, possible role ... 5547

food resources (See also hunger; more at RESOURCES ...)

food webs
analysis through field measurement of per capita interaction strength; trophic dynamics ... 3689
Arctic Ocean; PCBs; pesticides, chlorinated; organochlorines ... 3802
C pathways; trophic dynamics, analysis ... 4186
relationships; Benguela Current, ecosystem ... 4189
Barents Sea; primary production ... 4226

Foraminifera
Pliocene, -Pleistocene; North Sea, central; sediments, stratigraphy and correlation ... 3593
assemblage zones; marsh communities; sea level, and flora, influence ... 3791
present distribution of soritids and peneroplids; Florida, Keys; in French, English abstract ... 3792
Pleistocene; Arctic Ocean; sediments; fossil record ... 4114
abyssal agglutinated; Cretaceous, upper; paleoceanography, implications ... 4116
benthic, planktonic; Holocene, Early; Mediterranean Sea, Ionian Basin stagnation ... 4117
benthic; Nigeria, Tarkwa Bay ... 4299
communities; Chukchi Sea ... 4302
carbon, isotopic data; fossil record; model for interpretation 4709
Quaternary; submarine canyons, Wilmington, South Wilmington, North Heyes ... 5319
planktonic percentage; Arabian Sea; sediments ... 5337
planktonic; Walvis Bay, environmental indices; sediments, Late Holocene ... 5342
assemblages; Holocene; Mediterranean Sea, Catalan margin; sedimentation, processes; in French, English abstract ... 5344
Lau Basin; oxygen, isotope stratigraphy ... 5345
reticulate globigerines; Oligocene, Late, and Early Miocene; Australia; fossil record ... 5349
Discocyclina; fossil record ... 5350
benthic; Cretaceous-Tertiary boundary; extinction, low rate ... 5352
Paleogene; extinction; population dynamics ... 5353
benthic morphotypes, Recent; Norwegian Sea; Greenland Sea ... 5354
benthic, changes; Cretaceous-Tertiary boundary; DSDP sites 525, 527, 465 ... 5355
planktic; upwelling zones; phytoplankton ... 5494
benthic, distribution and biomass; California, central, slope and rise; oxygen, pore-water content ... 5555
benthic, fluctuations; Santa Barbara Basin; anoxia ... 5556
North Carolina, slope, distribution on; Bathysiphon, filiformis, major ... 5557
Discoramulina, bollii; morphology, ecology, biogeography ... 5558
benthic, distribution and population dynamics; North Sea, S ... 5559
ice ages; circulation; carbon cycle; cadmium ... 5882
benthic; Pacific, W equatorial; opal, biogenic; productivity, glacial to postglacial changes ... 5886
planktonic; South Atlantic, past 700 kyr; upwelling, increasing seasonal ... 5888
benthic; Adriatic Sea, N; organic matter, flux ... 5897

planktic, diversity as indicator; pelagic environments 5900
planktonic; Paleogene; fossil record, survivorship analysis; extinction 5902
response; Baltic Sea, Kiel Bight; organic matter, flux rates . 6051
growing processes; seawater; isotopic fractionation between .. 6052
Bo Hai Sea; sediments; in Chinese, English abstract 6053
Mediterranean Sea, W; Posidonia; seagrass beds; in French, English abstract 6054
benthic; organic matter, flux; oxygen, content 6055
planktic, as indicators; North Atlantic, E, April and August; water masses, surface 6190
benthic; fossil record; paleoclimate, indicators of paleomonsoonal precipitation 6360

Foraminiferida
Scandinavia; Globopelorhiza, sublittoralis n.gen., n.sp. ... 4301

forecasting
systems; Northern Hemisphere; sea ice 5719
circulation; Navy experimental center 6097
U.S., Fleet Numerical Oceanography Center operations and products; numerical modelling 6514

Forth Estuary
Scotland; organochlorines, HCB, TCB, chloroform 5827

fossil<s> (See also micro- and nannofossils ...)

fossil fuels
from; carbon dioxide, uptake 5226

fossil record
Pacific, E tropical, and the East Pacific Barrier; paleoceanography; biogeography 3584
microfossils; Tertiary, and Quaternary; West Antarctic Ice Sheet, Ice Stream B; ice sheets, beneath 3604
North Pacific, NE; Asteroidea; biogeography, of origin and radiation; sand dollars, dendrasterid 3614
circumpacific deep-water faunas; Tethys, western; Permian, evidence for Tethys position 3615
in relation to tectonic and paleoceanography; Jurassic, Mid-Late; Cretaceous; Tethys; Brachiopoda, biogeography 3618
Pleistocene; Arctic Ocean; Foraminifera; sediments ... 4114
Holocene; Antarctica, beaches 4704
North Atlantic; Rockall Plateau; Dinoflagellata, cyst, biostratigraphy 4705
evolution; vertebrates, history 4706
extinction, and origination, declining rates 4707
Foraminifera; carbon, isotopic data; model for interpretation 4709
Oligocene, Late, and Early Miocene; Australia; Foraminifera, reticulate globigerines 5349
Foraminifera; Discocyclina 5350
nannofossil chronology; Miocene; North Atlantic, DSDP Site 608 5351
survivorship analysis; Paleogene; Foraminifera, planktonic; extinction 5902
Foraminifera, benthic; paleoclimate, indicators of paleomonsoonal precipitation 6360
Paleocene; Eocene, earliest; North Atlantic, Biscay Gulf, paleoceanography; sediments, biostratigraphy; in French, English abstract 6364
Mollusca, shells; amino acids, composition 6368
stratigraphy; Pliocene; Costa Rica, Caribbean and Pacific coasts; Panama: Isthmus of, closure 6378

fouling
Biscayne Bay; plastic debris, floating 4978

fouling communities
ecology; Malaysia, Johore Strait 3751

fouling organisms (More at ORGANISMS ...)

fracture zone<s> (More at LITHOSPHERE ...)

fracture zones
Pacific, between Clarion and Clipperton fracture zones; crust, compression structures 4154
North Atlantic 4780
Marquesas Fracture Zone; shear stress, geophysical constraints 5414
new evidence of one; Pacific, Nova-Canton Trough; tectonics 5427

Fram Strait
Yermak Plateau; Arctic area; winter oceanographic conditions 4386
Copepoda, life history; Calanus, 3 spp.; Metridia, longa; in German, English abstract 6495

France
Aulne Estuary; copper, dissolved, distribution; in French, English abstract 3507
Thau Lagoon; phytoplankton, population spatial organization; coastal lagoons; in French, English abstract 3711
Bay of Mont Saint-Michel; intertidal zone; emersion, rates, spatial model; in French, English abstract 3744
Arcachon Bay flats; seagrass beds, and oyster parks; carbon, sedimentary, quality; benthic respiratory potential 4272
Bay of Seine; Polychaeta; Owenia, fusiformis, transport 5541
Atlantic coast; metals; organochlorines; pollution, flounder muscle as indicator 6071
Arcachon Basin; coastal zone, surveying 6086
distributions in Bay of Marennes-Oleron; cadmium; mercury 6307

Franz Josef Land
Svalbard; polar seas; ice, tidal, dynamics 4477

free fall vehicles (More at OCEANOGRAPHIC APPARATUS ...)

French Polynesia
Society Islands; volcanism, and geochronology; hotspots; in French, English abstract 3641

French-American Mid-Ocean Undersea Study (Use FAMOUS)

freshwater (More at WATER ...)
supply; Okhotsk: Sea of, to; Soya Warm Current; currents, volume transport; in Japanese, English abstract . 4404
discharges; zooplankton, mortalities; fjords 4844
fluxes; surface; heat flux; weather forecasting, U.K. Meteorological Office 5785

freshwater inflows
Texas, Lavaca Delta and bay; macrobenthos, effects on 6016

freshwater transport
by oceans 4400
Papua New Guinea, Gulf of Papua, Fly Delta; sedimentation, effects on; benthic processes 4996

freshwater-seawater interface (More at FRONTS, INTERFACES, WATER ...)

friction
kinetic; ice, saline; at low sliding velocities 3344

friction: bottom
effects; breaking waves 6203

friction: tidal
Earth rotation; history of science 4352

friction: turbulent
fluid dynamics 5116

front<s> (See also BOUNDARY LAYERS, convergence, INTERFACES, intrusions, LAYERS, ZONES; more at ATMOSPHERE, OCEAN ...)

frontal circulation (More at CIRCULATION ...)

frontal filaments
breakup 5111

frontal inversions
atmospheric waves, Kelvin-Helmholtz 4599

frontal waves
upstream; blocking, diabathic; model study 3394

frontal zones
coastal; phytoplankton; photosynthates, partitioning 6457

frontogenesis
German Bight; stratification, extreme, during; in German, English abstract 5049
gravity flows; density, non-uniform gradients; fluid dynamics 5118

fronts
recurring; California Current, off Ensenada, Mexico; phytoplankton, assimilation numbers 3706
Antarctic Circumpolar Current, Indian sector; current transport 3880
oceanic, mesostructure; Polar Front 3885
Antarctic Slope Front nature and significance; Antarctica ... 3886
thermal; internal gravity waves, caused by; reflections from slope 3892
subtropical, in; inertial waves 4475
atmospheric and oceanic; air-sea interactions; atmospheric turbulence 4574
near a shelf-break; stability 5050
coastal; North Carolina, off; rainbands 5138
at; vorticity; circulation, vertical 5658
shelf-slope; Spain, NE, off; currents, inertial 5659
major system characterization; Gulf Stream; nowcast/forecast system 5680
and ice movement, relation to; Arctic area; cloud plumes .. 5743
across; U.S., SE shelf; iodine, speciation 5825
Catalan, across; Mediterranean Sea, NW; phytoplankton, variability 5979
tructure; Japan, off; Kuroshio 6192
biomass, accumulations; ecological significance 6459

fronts: atmospheric
cold; Pacific, E, over; observations 3444

cold; South Brazil Bight, response; circulation, subtidal ... 6252
fronts: density
on; stratification, effects ... 3393
fronts: interior
circulation; spontaneous shocks ... 5679
fronts: sea breeze
India, Thumba coast ... 5755
fronts: thermohaline
Tokyo Bay, mouth ... 6193
fronts: tidal
influence; phytoplankton, distribution and productivity; in Korean, English abstract ... 5462
fronts: tidal intrusion ... 5683
Fucales
Mediterranean Sea, NW; Cystoseira, caespitosa, community structure and dynamics ... 4306
Fucophyceae
Mediterranean Sea, checklist; seaweeds ... 6062
Fucus
distichus; Vancouver; Phaeophyta; population dynamics 4305
vesiculosus, radioactivity; Baltic Sea; Chernobyl fallout ... 4314
vesiculosis
as bioindicator; radioactive discharges; model of accumulation and time-integration ... 4945
ceranoides; Baltic Sea; floral recruitment ... 5561
canopy vegetative regeneration; community succession ... 5563
fuel (More at POWER ...)
fuel oil (More at OIL ...)
fuels: fossil
from; carbon dioxide, uptake ... 5226
fumaroles
Papua New Guinea, Matupit Bay; seafloor; gases, volcanic; chemistry ... 4752
Fundy: Bay of
Saint John, records; tides, possibility of rapid changes ... 4436
seston, partitioning in; cadmium; lead ... 4637
fungi (More at FLORA ...)
Bengal: Bay of, Madras coast; sediments; water column; mycoflora ... 6034
marine; India, Mangalore coast ... 6037

gabbros (More at IGNEOUS- ...)
gadolinium
seawater, behavior in ... 4003
Galapagos Archipelago
islands, drowned; speciation, extended; hotspots, downstream from ... 3575
Ostracoda, anchialine; Cyprididae, and Paracypridinae reviewed ... 4923
gales (More at WINDS ...)
Gammaridea
Portugal, SW shelf; Caprellidea ... 4289
Gammarus
zaddachi; Amphipoda; migration ... 4922
Ganga-Brahmaputra River
system; Bengal: Bay of, fluxes to; strontium, isotopes; rubidium; weathering, Himalayan ... 5794
GARP Atlantic Tropical Experiment (Use GATE)
gas (See also bubbles ...)
hydrocarbons, indicator techniques; exploration geology; oil; annual geophysical report ... 4801
gas bubbles
depth, lifetime; breaking waves ... 3920
gas exchange
tracers, seawater; sulfur hexafluoride; helium, -3 ... 3473
Antarctica, shelf waters; mixing ... 4395
rates; air-sea interface; breaking waves ... 4566
air-sea interface; small-scale surface streaming ... 5723
bubbles, populations; brines, hypersaline ... 5727
wind, speed; air-sea interface ... 5749
gas fields
genesis; Alaska, Barrow; impact craters, Avak ... 5331
gas hydrates
Crimean Sea, base of slope ... 4170
Vancouver Island; methane; sediments, seismic reflectors 5858
methane, formation; sediments, seismic reflectors, fluid expulsion ... 5873
gas transfer
air-sea interface; breaking waves ... 5150
gases
volcanic; seafloor; fumaroles, Papua New Guinea, Matupit Bay; chemistry ... 4752
gases: greenhouse
emissions; climate change; sea level; revised IPCC scenarios 5740
climate, response ... 6245
atmospheric carbon dioxide, and methane; air, samples ... 6263
gases: noble
basalts, submarine glasses; seamounts, Loihi; mid-ocean ridges ... 4749
gases: volcanic
hydrocarbons, sampling, analysis ... 3644
Gastropoda
Arctic Ocean; Limacina, helicina, midsummer diet ... 3766
life histories; Littorina, 2 spp.; predation, effects ... 6022
effects on; oils; dispersants; intertidal zone; in Korean, English abstract ... 6507
Gdansk: Gulf of
surface microlayer; bacteria ... 6032
gear selectivity
fisheries management; yield per recruit analysis ... 4343
genetic algorithms
artificial intelligence; for strongly nonlinear geophysical optimization problems ... 3811
Geochemical Ocean Sections Program (Use GEOSECS)
geochemistry
computer software; mineralogy; volcanology; petrology; applications ... 4060
geochronology (See also dating, sclerochronology ...)
geodesy
tracking by; plate motions; report ... 4371
plate motions; VLBI sub-mm horizontal position determinations ... 4716
from space; tectonics, global; plate motions ... 5386
and seismology; crustal deformation; symposium proceedings 5413
Great Britain, sea slope anomaly; sea level, mean ... 5904
surface, determinations ... 5906
geodetic surveys
maritime boundaries; algorithm ... 5909
Geodynamics Experimental Ocean Satellite (Use GEOS)
geodynamo
theory; magnetic field; core ... 4711
geohazards: deep-sea
engineering, challenges ... 3818
geoid
anomalies; dynamic topography; mantle plumes; convection structures, applications to Earth and Venus ... 3659
geological hazards
offshore; Hellenic Arc ... 5835
geological record
Geomagnetic Polarity Time Scale; Miocene-Pliocene boundary, extension to; geomagnetic field ... 3587
glaciation; climate, history ... 3612
throughout; atmospheric oxygen ... 4111
sedimentation, rhythmicity; Earth orbit, forcing by ... 6339
geology (See also catastrophism, EARTH, planetology ...)
geology: exploration
hydrocarbons, indicator techniques; gas; oil; annual geophysical report ... 4801
geomagnetic<s> (More at MAGNETICS ...)
geomagnetic field
variability; solar cycles; weather; climate ... 3417
Miocene-Pliocene boundary, extension to; geological record, Geomagnetic Polarity Time Scale ... 3587
polarity, reversals, periodicity ... 4125
reversal frequency; mantle plumes ... 4156
reversal frequency; mantle plumes; correlation ... 4157
coast effect ... 4713
disturbances, during; atmospheric pressure, increases ... 4717
reversals, geometry; paleomagnetism, constraints ... 4723
magnetism, rock; paleomagnetism; research in magnetostratigraphy and paleointensity; collection ... 5357
reversals; Brunhes-Matuyama boundary; Ar dating ... 5358
reversals; core-mantle boundary, conducting layer ... 5364
Exmouth Plateau; Indian Ocean, adjoining basins ... 6369
geomagnetism
magnetic field, reversals; no link established with plate tectonics ... 5005
geometry: stochastic
applications; plankton ecology ... 6447

geophones
boreholes, downhole; hydrophones; comparison 6314
geophysical fluid dynamics (More at FLUID DYNAMICS...)
dissipative effects; internal waves, gravity 6204
geophysical phenomena
mathematical modelling; stability analysis 5589
Georges Bank
S; North Atlantic; stratification, annual cycles 4385
sediments, thermal history modelling 6347
Georgia: Strait of
British Columbia; currents, residual 5041
geoscience
World Ocean; Degens: Egon T.; biogeochemistry; memorial volume 4363
geostatistical analysis
stability 4329
recent developments 5238
spatial patterns, interpretation 5969
geostrophic circulation
governing equations 4390
Brazil Current, thermal structure; in Portuguese, English abstract 5675
geostrophic flow (More at FLOW ...)
fluid dynamics; current meanders; eddies, flux 3389
Maine: Gulf of 5649
geostrophic instability
quasi-; fluid dynamics; momentum, wave-energy and pseudoenergy, conservation 5120
geostrophic turbulence 4399
geosynclines (More at LITHOSPHERE ...)
geotechnical properties: sediment
India, Cochin, Mangalore; clays, smectite-rich 5864
geothermal energy (More at ENERGY ...)
geothermalism
crust, DSDP holes 333A, 395A, 534A 5369
German Bight
frontogenesis; stratification, extreme, during; in German, English abstract 5049
benthic macrofauna 5505
Asterias, rubens; organochlorines 6077
Germany
experience; positioning, GPS use 6108
GEWEX
report 4333
Gibraltar Arc
kinematics; paleomagnetic field, rotations; tectonics 5384
Gibraltar: Strait of
sea level, LF oscillations; EOF decomposition 5697
Gigartina
pectinata; California: Gulf of; Rhodophyta; growth responses, biomass variation 6504
glacial isostasy (More at isostasy ...)
glaciation (More at ICE ...)
climate, history; geological record 3612
terminations I, II, and IV; surface temperature 4690
last maximum; North Atlantic; carbon, organic, distribution; organic matter 5854
effects; North Atlantic; insolation, influence; atmospheric circulation 5885
Quaternary, Late; Newfoundland, Bonavista Bay; sedimentation 6354
Glacier Bay
Queen Inlet; turbidity currents; delta sediments; slope processes, submarine channels 6333
glaciers: tidewater
sedimentation, processes 3322
ice calving, velocity, and water depth 3352
glaciology
Quaternary, Late; Weddell Sea, S margin; paleoceanography 6359
glass (More at SILICATES ...)
glasses: volcanic
speciation of water 5933
glitter: surface
scintillations 4383
Global Atmospheric Research Program (Use GARP)
global carbon cycle
marine biosphere, role 5223
World Ocean, role 5824
carbon dioxide, natural sinks; workshop papers 6306
global climate
hydrological cycle, role 4557
global commons
oceanography, history of scientific and technical assistance; developing countries 4357
viewpoint; organochlorines; pollution; pesticides 4976
pollution, marine, from land-based sources; toward a global approach 4977
energy resources; a realistic outlook 6126
U.S.; Europe; Japan; international politics; groping for new definition of roles 6520
Global Energy and Water Cycle Experiment
report 4333
global heat budget (More at HEAT ...)
Global Positioning System (More at navigation ...)
global radiation
changes; climate 5133
global salinity
patterns 6283
global temperature
trends 5128
spectra; climate change, detection 6239
global warming
temperature, diurnal, evidence for asymmetric changes 3420
U.S., federal plan reviewed, report; climate change, data ... 4376
Antarctica; climate change, evidence 4377
greenhouse effect; statistical hypothesis 4562
response to; U.S.; climate change; greenhouse effect 4988
climate modelling; limits 5009
climate change; global change debate, research 6133
climate change, on trial 6140
greenhouse effect; albedo, increase 6246
climate change, ecological consequences; sea level, rise 6525
thermostat hypothesis 6528
Global Weather Experiment (Use GWE)
Globopelorhiza
sublittoralis n.gen., n.sp.; Scandinavia; Foraminiferida ... 4301
gneisses
granulite, Pan African age for; Red Sea; Zabargad Island; rifting, implications for 4155
Goa
Mandovi Estuary; sediments; organic matter, carbon 5802
goethites
inferred from; carbon dioxide, ancient atmospheric pressures 3611
goldmanite
detrital; Paleocene; North Sea; sediments 5284
Gondwana (More at PLATE TECTONICS ...)
tectonomagmatic controls on breakup; Antarctica, proto-Pacific margin; plate tectonics 3637
E; Proterozoic, to Mesozoic; plate tectonics 5391
and predecessor; Antarctica; continents, supercontinents .. 5919
W; crust; mantle, fragmentation due to hot upflow 6391
within; Mesozoic; tectonics, rotations 6392
Gorda Plate
Eel River Basin; subduction zones; crust, deep structure . 4782
Gorda Ridge
Juan de Fuca Ridge; basalts, MORB geochronology and petrogenesis; erratum 5927
Gorringe Ridge
North Atlantic; crust, structure 4140
government (See also public administration; more at LAW, POLICY and RESOURCE MANAGEMENT ...)
grab samplers (More at SAMPLERS ...)
graben sediments
Miocene; Mediterranean Sea, Sardinia 4695
gradients (See also thermal gradients; lysocline, thermocline; more at ATMOSPHERE, FRONTS, INTERFACES, LAYERS, OCEAN, STRUCTURE, ZONES ...)
grain size (More at SEDIMENTATION ...)
distributions; flocculation, processes, implications for; quartz, extracts; feldspar, extracts 3542
Grand Banks
W; Newfoundland; sedimentation, transgressive; waves; currents 5846
primary production; model for determination 5995
granite (More at IGNEOUS- ...)
A-type; Red Sea, opening; spreading zones 5415
graphite
Indian Ocean; sediments, pelagic 4089
gravity
symmetrical anomalies; mid-ocean ridges; spreading centers, velocity variations 4120

roughness; spreading ridges, rate ... 4722
gravity currents (More at CURRENTS ...)
fluid dynamics ... 3932
gravity field
precise determinations ... 4119
structure; mid-ocean ridges; spreading centers, spreading rate dependence ... 4123
Red Sea; Africa, East ... 4124
Southern Ocean ... 4720
error covariance weighting; surface, mean, estimation ... 5363
from satellite altimetry; Antarctica ... 5365
anomaly; Hudson Bay; deglaciation, rebound, Laurentide . 6371
gravity flows
Tonga Trench, slopes, rock recycling; tectonics ... 3537
frontogenesis; density, non-uniform gradients; fluid dynamics ... 5118
gravity waves (More at WAVES ...)
surface; numerical solution of the kinetic equation ... 4455
surface; propagation over submerged bar ... 5076
gravity waves: internal
caused by; fronts, thermal; reflections from slope ... 3892
grazing
chief control; primary production, controls on; photosynthesis, characteristics ... 3698
rates; Bivalvia; zooplankton ... 4815
zooplankton, estimates; phytoplankton, growth estimates; precision ... 5468
role; pelagic ecosystems; nutrients, -rich areas ... 5471
Sweden, W coast; zooplankton, feeding ecology; phytoplankton blooms ... 6003
by limpets; intertidal zone, rocky; macroalgae, effects on .. 6013
Tunicata, Pyrosoma atlanticum; phytoplankton, standing stock, impact on; organic matter, carbon, flux ... 6454
Great Bahama Bank
margin sediments ... 4085
Great Barrier Reef
waters; photochemical activity ... 3487
Amphipoda, paracalliopiidae; Yhi, yindi, n.gen., n.sp. ... 3771
Amphipoda, dexaminid; Guernea, ipilya, yamminye, n.spp. . 3786
Amphipoda, corophioid; Wombalano, yerang, n.gen., n.sp. . 3788
ReefPlan; oil spills; contingency plans inadequate ... 3829
lagoon; bacteria, profiles; sediments, coastal ... 6029
Acanthaster, planci, reproduction, recruitment and hydrodynamics; Echinodermata; predation, by crown-of-thorns starfish ... 6491
Great Britain (See also British Isles, U.K. ...)
sea slope anomaly; geodesy; sea level, mean ... 5904
greenhouse effect (More at ATMOSPHERE ...)
Northern Hemisphere; climate warming; ice sheets, will they grow? ... 3422
comment on; climate change, global; too little biological research ... 3941
clear-sky, sensitivity; surface temperature, SST change ... 3951
and Leibig's law; nutrients; iron, limitation, fertilization; relationships ... 4216
global warming; statistical hypothesis ... 4562
U.S.; climate change; global warming, response to ... 4988
and greenhouses; Wood: R.W.; overlooked experiments ... 5003
climate change; annotated bibliography ... 6241
climate, studies ... 6243
global warming; albedo, increase ... 6246
greenhouse gases
emissions; climate change; sea level; revised IPCC scenarios 5740
climate, response ... 6245
atmospheric carbon dioxide, and methane; air, samples ... 6263
Greenland
NE shelf; sediments, seismic reflection through sea ice ... 4150
North America, E coast; South America, E coast; tides, tables, 1992 ... 4439
E, Scoresby Sund Fjord; icebergs, size, frequency, freeboard .. 4478
Greenland Ice Sheet
Quaternary, past 150,000 yr; ice cores, O-18 record ... 3599
ice cores; climate, history ... 5006
Greenland Sea
Barents Sea; sea ice, distribution ... 3328
convection, deep ... 5024
Eurasian Basin; sea ice ... 5092
Norwegian Sea; Foraminifera, benthic morphotypes, Recent ... 5354
Jan Mayen Current; currents ... 5667
groundwater
discharge to coastal ecosystems; sea level, effects; runoff ... 4059
growth
rate assessment; corals, skeletal extension ... 4912
growth: phytoplankton
rates; diel DNA synthesis cycles ... 4198
rates; methods ... 5985
growth rate
population dynamics, entropic effects; evolution, changes . 5587
Guadeloupe
La Soufriere; volcanism ... 5410
Caribbean area; coastal zone, effects on; hurricanes, Hugo; in French, English abstract ... 5449
Guam
Joint Typhoon Warning Center; tropical cyclones; storm forecasting, challenges ... 6273
guanosine triphosphate (Use GTP)
Guatemalan Basin
S; ferromanganese nodules ... 4176
Guaymas Basin
Juan de Fuca Ridge; manganese, biochemistry; metals, fluxes; hydrothermalism, areas of ... 5314
sediments, hydrothermally altered; beryllium, isotope geochemistry ... 5871
hydrothermal deposits; S, C, O isotope variations ... 5878
Guernea
ipilya, yamminye, n.spp.; Great Barrier Reef; Amphipoda, dexaminid ... 3786
Guinea: Gulf of
upwelling ... 5055
Guinea Plateau
SW; tectonics, and currents, influences; margin, geomorphology ... 5839
Gulf Stream
currents; remote sensing, SAR observations ... 3297
from; barotropic waves, radiation ... 3898
von Humboldt: Alexander, unpublished manuscript ... 4355
rings, warm-core, 82B; ring structure, evolution ... 4409
meanders; rings, warm-core, 82B, origin of waters ... 4424
Cape Hatteras, shelf N of; water masses, penetration ... 4425
nitrogen, particulate; zooplankton; rings, warm-core, 86A; N-15 abundance ... 4857
fish, distribution, composition; rings, warm-core, 82-H ... 4875
Kuroshio; rings, warm-core; eddies; workshop collection .. 4968
variability, separation; circulation; currents ... 5653
path prediction; currents ... 5668
satellite imagery; currents; comparison with model results ... 5669
fronts, major system characterization; nowcast/forecast system 5680
relationship; South Carolina, shelf; sea level, fluctuations .. 6196
vorticity, barotropic, merging; rings ... 6232
Gymnodinium
sp., growth and grazing rates; North Pacific, subarctic; Dinoflagellata ... 4232
gyres (More at CURRENTS, FLUID DYNAMICS ...)
instability; in continuously stratified ocean ... 3924
biology, hydrography; Weddell Sea, late winter; regional relationships ... 4365
Weddell; Weddell Sea, Maud Rise effects; stratification; circulation ... 4389
subtropical; deep circulation, recirculation ... 4394
subarctic, seasonal cycle; North Pacific; bottom topography ... 5026
Rhodes; circulation, variability ... 5029
eastern subtropical; ventilation; circulation ... 5650
subtropical; circulation, re-; vorticity, cooling spirals ... 5676
center and edges; North Pacific, central; phytoplankton, species structure ... 6005
gyres: Sverdrup
instability; model ... 3405
Gyrodinium
cf. aureolum; Argentine Sea; Dinoflagellata; blooms, unusual ... 4858
cf. aureolum, green mass aggregations; Spain, NW, Ria of Pontevedra ... 6066

habitat<s> (See also chambers, niches, refuges, tanks; more at DIVING, ECOLOGY ...)
habitats: benthic
restrictions; Reptantia; Homarus, americanus, habitat selection and predation ... 6020

habitats: coastal
subtidal; Arabian Gulf; thematic mapping 4965
Halichoerus
grypus; Pinnipedia; seals, gray; satellite tracking 4879
Halifax Harbor
a chronology of contamination; hydrocarbons; metals; sediments 3517
haline fronts (More at FRONTS ...)
halite (More at SALT ...)
Halobates
populations; Mexico: Gulf of 6039
halocline
barrier layer between; mixed layer; thermocline; tropics .. 5646
Halocyprididae
Ross Sea; Ostracoda, planktonic 4917
halogen compounds
sediments 5788
harbor<s> (More at COASTS ...)
harmonics: tidal
composite; representation, analysis 3305
Harpacticoida
contributions to knowledge; 2 n.spp., 1 n.ssp.; in German, English abstract 3782
associated with Spartina; Louisiana, Cocodrie 4282
metamorphosis 4918
hatcheries (More at AQUACULTURE ...)
Hawaii
last refuge; seals, monk; extinction, in danger of 3843
beneath; seismic discontinuities 4775
Quaternary, marine terraces; California; sediments; sea level, history 5334
basalts, tholeiitic, petrogenesis; phase equilibria constraints ... 5925
W; tectonics, seismotectonic model 5948
seismic gaps; earthquakes 6439
Hawaiian Archipelago
North America, W coast; South America, W coast; tides, tables, 1992 4438
rare earths, geochemistry; ferromanganese crusts 4807
hazard assessment
U.S., Volcano Hazard Program; volcanism 5409
hazards: geological
offshore; Hellenic Arc 5835
hazards: pollution
drift plastics; conservation islands 5606
health
medical problems associated; diving physiology; review article 3819
heat (See also TEMPERATURE, thermal ...)
generation, and pressure melting; ice, indentation and impact experiments 3333
balance, oceanic; temperature; 4-D analysis of hydrophysical fields 4568
heat budget: surface 3415
Heat Capacity Mapping Mission (Use HCMM)
heat flow
density; Red Sea, distribution in 4128
thermal conductivity 5370
heat flow: lithospheric
Mallorca, and Menorca; Mediterranean Sea, W 6375
Valencia Trough, geodynamics 6376
heat flux
latent; North Atlantic, over, case study 3427
Florida Current; current transport 4413
variability; over-ocean; bulk formula estimates 5124
anomalies; ocean-atmosphere interactions; atmospheric circulation 5137
California: Gulf of; air-sea interface; momentum flux; in Spanish and English 5744
surface; freshwater, fluxes; weather forecasting, U.K. Meteorological Office 5785
Juan de Fuca Ridge; Axial Volcano; hydrothermal vents, areas 5934
oceanic; ice, growth; models 6218
Trieste: Gulf of; evaporation; air-sea interactions 6247
heat flux: eddy
hemispheric teleconnections 4590
heat flux: turbulent
sea ice, beneath 5110
heat: surface
balance; Pacific; Indian Ocean; El Niño, mature phase 1982-83 6253
heat transfer
coefficient; variation with environmental parameters 4583
heat transport (More at TRANSPORT ...)
related; rings, genesis; eddies 4528
heating
upper ocean; atmosphere, by; ocean-atmosphere interactions 4579
heavy metals (More at METALS ...)
Cuba, 5 bays; sediments 3518
sediments, bioavailability, accumulation, effects in; estuaries, U.K.; review 4943
Alexandria Harbor, Egypt 5235
budget; Arcachon Basin; Zostera, noltii; eelgrass, importance; in French, English abstract 6063
Hebrides (See also Inner-, New- and Outer Hebrides ...)
Heezen: Bruce A.
history of oceanography 4994
Helgoland
waters around; bacteriophages 5526
helicopters (More at AIRCRAFT ...)
helium
-3; gas exchange; tracers, seawater; sulfur hexafluoride . 3473
Black Sea; neon; tritium 3482
-3 distribution; Indian Ocean, deep W and S 3865
Southern Ocean; chlorofluorocarbons; water masses, tracers of 3887
-3 anomalies; submarine volcanoes, activity; methane, anomalies 4139
anomalies; Atlantic; seawater, surface 4621
Hellenic Arc
seismicity, micro- 4771
geological hazards, offshore 5835
Holocene; arc tectonics 5910
hemispheric teleconnections
eddy heat flux 4590
herbicides
degradation; pollutants, enantiomer separation; microbiota 6079
herring
larval, distributions; North Sea; Clupea, harengus, autumn-spawned 3734
larval, infection by helminth parasites; North Sea; Clupea, harengus; feeding, effects on 3735
hexachlorobenzene (Use HCB)
hills: abyssal
morphology; Atlantic Ocean, along flow lines 6420
Himalayas
northern; Mesozoic; Australia, NW; margin, evolution ... 4736
Hiroshima Bay
microbial biomass; community structure 6035
organic matter, particulate; decomposition, characteristics . 6288
history: Earth
paleoclimate; stability of the astronomical frequencies 4106
history of oceanography
oceans; marine research; proceedings 4356
Heezen: Bruce A. 4994
Stommel: Henry M.; obituary 6129
history of science (See also specific scientific disciplines; more at SCIENCE ...)
magnetic poles, seeking them 3619
tidal friction; Earth rotation 4352
Brussels, 1853; the First International Conference on Oceanography 4354
Arctic area, explorations; Nansen: Fridtjof 4359
Holland (Use Netherlands)
Holocene
Late; Black Sea; sedimentation, abyssal; climatic and chronological implications 3586
paleoclimate, from ice core records; paleoenvironment, from deep ground temperatures; comparison 3608
Late; subduction zones, Cascadia; tectonics, and paleoseismicity 3625
Indian Ocean, SE, accumulation rate in; biogenic silica ... 4105
Early; Mediterranean Sea, Ionian Basin stagnation; Foraminifera, benthic, planktonic 4117
Late; U.K.; North Sea; sea level, trends compared 4441
3000 yr of change; sea level 4564
Tees Esurary; sea level; sedimentation, intertidal 4661
Antarctica, beaches; fossil record 4704
Holland; coastal zone, evolution; shoreline dynamics ... 5251

Mid- and Late; Baltic Sea, Polish coast; transgression 5328
Mediterranean Sea, Catalan margin; Foraminifera, assemblages; sedimentation, processes; in French, English abstract 5344
Alaska, Cook Inlet; earthquakes, recurrence intervals 5880
Early; Antarctica; climate, optimum, evidence for; ice cores 5884
Hellenic Arc; arc tectonics 5910
Late, paleoecological development; Delaware River, Estuary, upper; marshes, tidal freshwater 6330
Japan, Hokkaido; crust, tilting; tectonics 6424
Homarus
gammarus, by; plutonium, accumulation 4961
americanus, habitat selection and predation; Reptantia; benthic habitats, restrictions 6020
homogeneous layer (More at LAYERS ...)
Homolodromiidae
Homolodromia bouvieri rediscovered, redescribed; Mozambique, off; Decapoda 4924
Hong Kong
Copepoda, inhabitants, 8 n.spp. of siphonostomes; sponges; algae 4288
host-epiphyte interactions
Maine: Gulf of; epiphytes; variation along a wave exposure gradient 3794
hotspot<s> (More at LITHOSPHERE, MANTLE ...)
hotspot volcanism
mantle plumes 5936
hotspots
downstream from; Galapagos Archipelago; islands, drowned; speciation, extended 3575
French Polynesia; Society Islands; volcanism, and geochronology; in French, English abstract 3641
mid-ocean ridges; interactions 3669
Cretaceous, Mid-; climate warming, major; mantle plumes 3840
distribution; mantle convection 5962
plate tectonics; mantle; magmatism 6390
Huanghai Sea
South China Sea; Bohai Sea; lead, -210; in Chinese, English abstract 5291
Hudson Bay
Raritan Bay; environmental monitoring 5590
Manitounuk Sound; solitons; mixing, and internal hydraulics; stratified estuaries 6227
gravity field, anomaly; deglaciation, rebound, Laurentide .. 6371
Hudson Estuary
geochemistry and loading history; phosphates; silicates 4974
Hudson River
Estuary; Ciliata, tintinnine; Nolaclusilis, hudsonicus n.sp., n.fam. 4303
human impacts
causality, and the choice of measurements for detection 3824
humans
effects; biosphere, on; use of paleoenvironmental understanding as key to prediction 6521
Humboldt Current
Benguela Current; Leeuwin Current; currents, major; zoogeography, provinces 4187
humic matter
humic acids; metals, ions, kinetic interactions 3999
humic acid, interaction with, at the mercury/water interface; cadmium 4005
makeup; salt marshes 5188
Amazon River, counterparts, comparison; seawater 5192
Tasmania, Macquarie Harbor; trace elements; organic matter, sedimentary; chemistry 5216
humidity
surface; World Ocean, remote sensing over; precipitable water 3940
humus (More at ORGANIC- ...)
hurricane<s> (More at STORMS ...)
hurricanes
structure; radar, technique for diagnosis 3450
Hugo; U. S. Virgin Islands, St. Croix; Mollusca, skeletal distributions 3535
implications for; carbon dioxide; climate, warming; discussion 3952
induced by; Texas, and Louisiana, shelf; currents; storm surges 3962
vorticity, motion and evolution modelled 3984
Caribbean area; ecosystems, effects on 4185
responses to; Caribbean area; ecosystems; plants; animals 4192
Hugo, 1989; Caribbean Sea, St. John; reefs, primary framework, effects on 4247
Hugo, 1989; Caribbean Sea, St. John; coral reefs, effects on 4253
-like disturbances, spontaneous growth; atmospheric convection, moist 4608
tracking; storm forecasting 4614
tracks; storm forecasting; wind, satellite-derived, impact ... 4616
Hugo; Caribbean area; Guadeloupe; coastal zone, effects on; in French, English abstract 5449
building codes, evaluated 5633
gust factors; wind, extreme 5753
Gilbert, 1988; concentric eyewall cycle 5762
Norbert, inner core; ice particles 5763
Norbert, inner core; kinematic structure 5765
formation; Atlantic; ocean-atmosphere interactions; role of environmental asymmetries 6260
hyaloclastites
Japan, Hokkaido; lavas; morphological and sedimentological characteristics 3650
hydrocarbon<s> (See also alkanes, GAS, OIL, PETROLEUM; more at ORGANIC COMPOUNDS ...)
hydrocarbon production (More at POWER ...)
hydrocarbon resources (More at RESOURCES ...)
hydrocarbon seeps
Mexico: Gulf of, NW slope 4797
hydrocarbons
Halifax Harbor, a chronology of contamination; metals; sediments 3517
in water, suspensate, sediments; Black Sea, Bulgarian shelf ... 3519
PAH determinations; trace analysis, direct coupling of supercritical fluid extraction/supercritical fluid chromatography 3520
non-aromatic, fractionation between dissolved and particulate phases; China; Chang Jiang, Estuary 3523
sampling, analysis; volcanic gases 3644
interactions with; Exxon Valdez; bacteria, marine; oil spills 3799
potential; Bering Sea, St. George Basin, evolution and thermal history; sedimentary basins 4169
North Sea; exploration seismology 4172
New Zealand, North Island; New Caledonia Basin 4173
PAH; Rhone Delta 4648
bituminous; Barents Sea; sediments 4798
fields; Mexico: Gulf of; Arabian Gulf; carbonate sediments, facies 4799
indicator techniques; exploration geology; gas; oil; annual geophysical report 4801
distributions; Cenozoic; Mexico: Gulf of; marginal basins 4803
Southern Ocean, baseline; seawater 4818
bioconcentration factors; Bivalvia; Mytilus, edulis 4953
San Francisco Bay; Bivalvia, the Asian clam; bioaccumulation 4954
PAHs; lead, relationship with; aerosols, anthropogenic influences 5171
isoprenoid; alkylbenzenes; sediments, distribution in 5198
potential; Red Sea; Aden: Gulf of; sediments, thermal maturity, source-rock occurrence 5435
prospects; Red Sea; Aden: Gulf of; petroleum potential 5436
prospects; Aden: Gulf of; tectonics, framework 5437
potential; Taiwan, Basin; crust, structure; in Chinese, English abstract 5438
potential; Red Sea; sediments, tectonostratigraphic framework 5440
Red Sea; Aden: Gulf of; petroleum exploration; methodology of regional cooperation 5441
Red Sea; Aden: Gulf of; petroleum potential; collection 5446
Australia, W, Rowley Shelf; sediments; biota, oysters 5578
petroleum; India, NW coast; sediments 5830
PAHs, biogenic; Rhone River, Delta; Mediterranean Sea, NW; sediments 5859
leakage; Bering Sea 5964
aliphatic; Mexico, Campeche Bank; sediments; biota 6074
Trinidad; biota 6081
light nonmethane; Pacific; atmospheric chemistry 6271
PAHs; Sweden, coast; Baltic Sea; organochlorines, dioxins, dibenzofurans; pollution, flux estimates, pattern recognition of particulates 6309
chlorinated; Adriatic Sea, Rijeka Bay; organochlorines, inflow, levels, fate 6311

hydrodynamics (More at FLUID DYNAMICS ...)
hydrofracture
conditions for; accretionary wedges; permeability, fluid; crust ... 4103
hydrogen
Black Sea, isotopic composition; oxygen ... 3481
isotope composition; water, geochemistry; magma, tholeiitic ... 3648
solubility; olivine, in; mantle, water storage implications ... 6406
hydrogen peroxide
with, in seawater; copper, II, reduction rate ... 4004
hydrogen sensors
fuel cell; marine applications ... 4625
hydrogen sulfide
Black Sea; oxidation, rate ... 3485
hydrographic surveys (More at SURVEYS ...)
use of spatial statistics ... 5644
Adriatic Sea, 1971-83 ... 6155
hydrographic tables
measurement standards; International Oceanographic Tables; Practical Salinity Scale; International Equation of State of Seawater; history ... 4358
hydrography
features; Iberian Peninsula; Cnidaria, planktonic; mesoscale coupling ... 3707
research status; South Africa, Republic of ... 5645
spatial variability; spring blooms, dynamics ... 5998
Hydroida
New Zealand; Cnidaria; Stylasteridae, 62 spp. ... 5538
hydrological cycle
role; global climate ... 4557
hydrophone buoys
drifting; acoustics; for the MOS-1 data collection system ... 4511
hydrophones (More at OCEANOGRAPHIC APPARATUS, SOUND ...)
boreholes, downhole; geophones; comparison ... 6314
hydrostatic pressure
Euler equations; fluid dynamics ... 4545
hydrothermal convection (More at CONVECTION ...)
hydrothermal deposits (More at DEPOSITS ...)
Lau Basin; nontronite geochemistry ... 5312
Guaymas Basin; S, C, O isotope variations ... 5878
hydrothermal fields
fauna, composition ... 3743
hydrothermal fluids
chemistry; South Pacific, Fiji Basin Ridge ... 3567
quartz, solubility ... 3570
Mid-Atlantic Ridge, Oceanographer Transform; brines, Ca-rich; inclusions, plutonic rock ... 4104
chlorides, concentration, controls over ... 5877
hydrothermal mineralization
Lau Basin; North Fiji Basin ... 5315
hydrothermal petroleum
Juan de Fuca Ridge, Middle Valley; sediments; organic matter, alteration ... 6351
hydrothermal plumes
East Pacific Rise ... 3568
associated with; Endeavour Ridge; scattering layers, deep ... 3569
Juan de Fuca Ridge; suspended matter, tracking via ... 4682
hydrothermal sediments
microbial ecology ... 6484
hydrothermal vents
minerals, formation ... 4684
near; bottom boundary layer ... 4686
near; metalliferous sediments; neodymium, scavenging residence time ... 5872
areas; Juan de Fuca Ridge; Axial Volcano; heat flux ... 5934
hydrothermalism
activity; seafloor; new field of research ... 4102
discharge volume; Juan de Fuca Ridge; magma, budget ... 4680
Lau Basin; North Fiji Basin; South Pacific, W; tectonics, and geological evolution ... 5245
Juan de Fuca Ridge; sulfide deposits, massive ... 5311
S-rich; Mariana Arc, Esmeralda Bank ... 5313
areas of; Juan de Fuca Ridge; Guaymas Basin; manganese, biochemistry; metals, fluxes ... 5314
Lau Basin; North Fiji Basin; geological evolution ... 5316
ridge crest; manganese, deposition ... 5874
spreading centers, Chile Ridge ... 5875
systems; magma, contributions ... 5876
hydroxyl: tropospheric
implications for; oceanic consumption of CH_3CCl_3 ... 3457
hyperbaric chambers (More at DIVING, TANKS ...)
hyperbenthos (More at BENTHOS ...)
Hyperiidae
life forms; Amphipoda; relative abundances in different ocean areas ... 6501
Hyphalion
sagamiense n.sp.; Japan; Sagami Bay; Copepoda, poecilostomatoid ... 5552
hyponeuston (More at PLANKTON ...)
hypothesis selection
Ockham's razor; Bayesian analysis ... 4964
hypoxia
tolerance; benthic fauna ... 4893
Baltic Sea, Kiel Bay; oxygen, deficiency increasing; eutrophication, paradigm ... 5568
Baltic Sea, Kiel Bay; benthic communities; eutrophication ... 5582
India, Hooghly Estuary; oxygen, deficiency ... 5800
aoshio water; Tokyo Bay ... 6523
hypoxic estuaries
ventilation, artificial, passive; feasibility study ... 4336
hypsographic surveys (More at SURVEYS ...)

Iberian Peninsula
Cnidaria, planktonic; hydrography, features; mesoscale coupling ... 3707
Tagus Abyssal Plain; continent-ocean boundaries; crust ... 4787
Neogene; Valencia Trough; Catalan Cordillera, coastal; crust, vertical movements, constraints on extension ... 6426
E margin; Neogene; Valencia Trough; crust, structure, evolution ... 6433
Iberides Mountains
Eastern, Spain; Pyrenees, Western, France; basins, Mesozoic, comparative study ... 3624
ice (See also glaciation, permafrost, pressure ridges ...)
snow; remote sensing; review and status ... 3324
saline, fracture toughness; notch-acuity effects ... 3326
indentation and impact experiments; heat, generation, and pressure melting ... 3333
ridging of thin sheet; ice leads ... 3336
physical properties, structure, stratigraphy; Arctic area; Ward Hunt Ice Shelf ... 3343
saline; friction, kinetic; at low sliding velocities ... 3344
granular; effect of grain size and temperature on microcrack nucleation under uniaxial compression ... 3345
under-ice boundary layer; quasi-analytical model ... 3349
freshwater, fatigue-crack growth ... 3351
edge, melt rates; Labrador, off; Newfoundland, E, off ... 3353
effect of confinement on brittle compressive fracture ... 3358
freshwater, indentation tests; energy, exchanges ... 3360
fracture on large and small scales; Arctic area, leads and wing cracks ... 3909
microalgae, seasonal development; Canada, Chesterfield Inlet; epontic algae ... 4313
fast, beneath; Antarctica, Lutzow-Holm Bay; water masses, exchange ... 4429
tidal, dynamics; Svalbard; Franz Josef Land; polar seas ... 4477
edge position formation; Arctic area; currents, West Spitsbergen Current, role ... 4481
cover thickness changes; Antarctica, Lake Hoare; lakes, water level changes; climate, local ... 4565
volume changes; atmospheric chemistry, oxygen, CO_2; deglaciation, penultimate, during ... 4700
platelet layers, in; Antarctica, early spring; phytoplankton blooms ... 4864
shore, as cause; Saint Lawrence Estuary; mud flats, ring structures ... 5272
mapping with SAR; Baltic Sea ... 6217
growth; heat flux, oceanic; models ... 6218
ice ages
thermohaline circulation ... 4694
during; Southern Ocean; iron, hypothesis; productivity ... 5454
Foraminifera; circulation; carbon cycle; cadmium ... 5882
astronomical theory; climate modelling ... 6244
last; Antarctica, ice cores; atmospheric carbon dioxide; C isotope composition ... 6357
transition to interglacial; atmospheric carbon dioxide; C isotopic composition changes ... 6358

climate change; carbon, budget; report 6527
ice calving
velocity, and water depth; tidewater glaciers 3352
ice caps: polar
science flourishes; report 3839
ice cores
O-18 record; Quaternary, past 150,000 yr; Greenland Ice Sheet 3599
Antarctic; carbon dioxide, content, paleovariations 4113
Greenland Ice Sheet; climate, history 5006
data; carbon dioxide; incompatibility with biotic source reconstructions 5219
Holocene, Early; Antarctica; climate, optimum, evidence for 5884
environmental information 6130
ice fauna (See also epontic communities; more at FAUNA ...)
ice floes
numerical simulations of compact convergent system 3335
collisions; 1-D model 3359
identification in satellite imagery 5713
ice flows
relict stripes; Ross Ice Shelf 3325
ice islands
ARLIS-II; icebergs, calving 5716
ice leads
ice, ridging of thin sheet 3336
over; Arctic Ocean, pack ice; atmospheric convection, buoyant 6220
ice: pack
Arctic area; LF vibrational motion 5086
modelling; cavitating fluids, as 5715
ice particles
hurricanes, Norbert, inner core 5763
ice rafting
recovery after; seagrass beds; fauna 4254
ice scours
and pits; Newfoundland, Grand Banks 4658
ice: sea
model; atmospheric circulation, GCM; physical basis for coupling models 3323
distribution; Greenland Sea; Barents Sea 3328
image analysis of thin sections 3329
deformation, fields, characteristic propagation in 3330
ridging extent 3331
dynamics; Weddell Sea, winter 3334
beneath; eddies, formation, evolution 3339
rheology, effects on seasonal simulations 3340
floe aggregate; Antarctica; rheology and movement 3341
Ward Hunt Ice Shelf, ancient strata, structure 3342
Nares Strait; polynyas 3346
texture; Weddell Sea, major mechanisms of ice growth 3347
effects of weather on satellite retrieval of concentrations, types . 3348
Arctic Ocean, W; autumn distributions 3350
Chukchi Sea; mechanical energy balance 3354
Arctic Ocean; seasonal model simulations 3355
over; energy flux, density estimation 3362
Arctic area; pack ice stresses and strains 3363
annual field reversal; Beaufort Sea; atmosphere, mechanisms responsible 3432
thin, over; ocean-atmosphere interactions; energy exchanges 3437
Weddell Sea, winter; nutrients, status 3497
Svalbard, near; macrofauna, sympagic 3717
Arctic area; Copepoda, exploitation by 3779
zone; Antarctica; biota 3905
types; remote sensing, spaceborne SAR, from 3907
beneath; waves, attenuation, roll motion 3908
Antarctic Peninsula, S George VI Ice Shelf; stratigraphy, stable isotopes, salinity 3910
over; drag, geostrophic, coefficients 3960
zone; Southern Ocean, between Elephant and South Orkney islands; organic matter, carbon 4014
extent; Antarctica, fluctuations 4479
microwave studies 4480
reflectances; Arctic Ocean; remote sensing 4482
breakup; floes, interactions; sound; noise 4525
sampling in; plankton nets 4863
Antarctic; Dinoflagellata, cysts 4935
beneath; nutrients; chlorophyll; sampler 5085
Southern Ocean, monthly distributions in 5089
Arctic area; morphology statistics 5090
classification 5091
Greenland Sea; Eurasian Basin 5092
atmospheric boundary layer 5093
beneath; turbulent heat flux 5110
leads; remote sensing, image analysis 5714
Northern Hemisphere; forecasting, systems 5719
brines, pockets, and channel structure; cast technique for analysis 5720
role; Southern Ocean; ecosystems, structure 5971
Beaufort Sea; bioluminescence, planktonic 5987
beneath; Weddell Sea; zooplankton; community structure 5999
growth; atmospheric radiation, thermal 6222
remote sensing, temperature dependence of beam scattering . 6223
ice sheets
floating; transient subsurface uplift 3327
will they grow?; Northern Hemisphere; greenhouse effect; climate warming 3422
beneath; Tertiary, and Quaternary; West Antarctic Ice Sheet, Ice Stream B; fossil record, microfossils 3604
dynamics; modelling 5087
unstable dynamics; climate change, abrupt; toward a new paradigm 5737
Greenland and Antarctic; volcanic ash; atmospheric transport, interhemispheric 5891
ice shelves
coupling with ocean 3332
ice temperature
Arctic area; AVHRR remote sensing 5088
ice zone: marginal
waves, incoming, role in dynamics 3361
Bering Sea; circulation, effects 3365
Southern Ocean, Scotia-Weddell Confluence; water column, upper, structure and evolution 3911
waves, directional spectra; estimation using linear prediction .. 4450
Euphausia, superba; krill, Antarctic 4919
Weddell Sea; Tintinnida, abundance, distribution in autumn 4930
Okhotsk: Sea of; structure, dynamics 5717
Weddell-Scotia Confluence; predators, top, as indicators of ecosystem events 5974
Weddell Sea; Scotia Sea; plankton, and other biota, ecology; *Polarstern* study 6094
floe pair interaction event 6219
sea level; positioning, GPS, height determinations 6221
Weddell Sea; Scotia Sea; zooplankton, proto-, abundance and feeding ecology 6460
icebergs
ridge-sail characteristics; Lancaster Sound, shear edge 3357
B-9; Southern Ocean, voyage in 3906
size, frequency, freeboard; Greenland, E, Scoresby Sund Fjord 4478
calving; ice islands, ARLIS-II 5716
icebreakers (More at VESSELS ...)
Iceland
Pliocene; Pleistocene; sediments; lavas; glaciation and climate record 3579
N of; Kolbeinsey Ridge; basalts, MORB, isotopic evidence against mixing with plume 3662
and the Afar depression, evidence from; spreading centers, axes; faults, strike-slip, parallel to 4162
Hekla, 1991; volcanic eruptions 4746
Tertiary; Pleistocene; faults, structure 4761
breeding in; Stercorarius, skua; seabirds 4900
seas around; nutrients, and fertility 5809
Lake Torfadalsvatn; volcanic ash layers; deglaciationast, high-resolution record 5881
ice-ocean dynamics
symposium collection 3338
ice-ocean interactions
dynamics; symposium papers summarized 3337
model; Arctic Ocean; circulation, interannual variability .. 3356
model; Arctic Ocean; circulation, interannual variability; numerical study 3364
Southern Ocean; ocean-atmosphere interactions; coupled model studies 3436
coupled model; Northern Hemisphere 6216
climate, long-term simulations; ocean-atmosphere interactions 6242
ice-rafted debris (More at DEBRIS ...)
ICES
North Atlantic; retrospective 3817
ichthyofauna
demersal; North Atlantic, E; abyssal zone 4880

ichthyoplankton (More at PLANKTON ...)
icing: vessel
temperature, sea, near-freezing; prediction; discussion 3462
ICZ (Use ITCZ)
igneous- (See also andesites, BASALTS, dykes, gabbros, granite, magma, ophiolites, peridotites, plutonic rocks, tholeiites, ultrabasites, volcanism ...)
imagery (More at REMOTE SENSING ...)
imagery: color
interpretation; remote sensing; signal processing 6151
impact assessment (More at ENVIRONMENT- ...)
and remedies; pollution 4338
impact craters
Canada; Sudbury Structure, and Igneous Complex, origin . 3656
buried; Caribbean Sea; Chicxulub, structure; catastrophism, global; report 4374
Avak; Alaska, Barrow; gas fields, genesis 5331
impact: environmental
North Sea, coastal waters; waste discharges, liquid 3827
Persian Gulf; Kuwait, and environs; war, aftermath; remote sensing data sets 3830
impact hypothesis
Cretaceous-Tertiary boundary; extinction, direct and indirect; report 4375
Phanerozoic; extinction 4708
impacts: bolide
Manicouagan; Triassic-Jurassic boundary; mass extinction; dates incompatible 3588
oblique; Argentina, Rio Cuarto crater field 3680
asteroids, earth-crossing binary, evolution 6142
impacts: comet
multiple; Cretaceous-Tertiary boundary; mass extinction; report 3841
impacts: human
causality, and the choice of measurements for detection 3824
imposex
New Zealand; Neogastropoda 5579
impoundments: river
effects; Zostera, capensis; seagrasses 5560
impulse fluxes (More at FLUXES ...)
Inaccessible Island
South Atlantic; geology, geochronology 4743
inclusions
plutonic rock; Mid-Atlantic Ridge, Oceanographer Transform; hydrothermal fluids; brines, Ca-rich 4104
fluid; minerals; identification of the phases 4654
India
coast; waves, statistics 5064
coast; particulates, biochemistry; suspended matter 5211
Cochin Estuary; trace metals 5231
coast; sediment transport, longshore 5253
W margin; sediments, record; upwelling 5295
Ninetyeast Ridge; Asia; paleomagnetism, constraints from; plate motions 5388
Bombay Harbor; basalts, submarine 5403
Gulf of Kutch salt pans; Calanoida; Pseudodiaptomus, n.sp. 5548
Bombay coast; Bivalvia, bioaccumulation in; metals, Cu, Zn, Fe, Mn 5574
W, Amba River Estuary; tidal flushing 5693
stations; tidal harmonics, analysis 5695
off Bombay; mixed layer, response; momentum flux, and buoyancy 5725
Thumba coast; sea breeze fronts 5755
Hooghly Estuary; oxygen, deficiency; hypoxia 5800
E, Hooghly Estuary; calcium; magnesium; semiconservative behavior 5821
NW coast; hydrocarbons, petroleum; sediments 5830
Visakhapatnam shelf; clay minerals; sediments 5856
Cochin, Mangalore; clays, smectite-rich; sediment geotechnical properties 5864
Pullavazhi; zooplankton, tidal and seasonal variations 6000
SE coast, Cuddalore-Uppanar backwater; benthic macrofauna 6018
E coast, Kakinada Bay and backwaters; benthic fauna 6019
SE, Vellar Estuary; bacteria, Cu-tolerant 6036
Mangalore coast; fungi, marine 6037
coast; bioactive metabolites; algae, antiviral extracts 6038
Cuddalore-Uppanar backwater; ecology 6131
coasts; waves, statistics 6199
central E coast; suspended matter; particulates, biochemistry 6296
coast; sediment transport, longshore 6324
W, Trombay Bay; sedimentation, rate 6336
W, off Gangolli; shelf sediments 6342
Cochin Harbor; sediments, texture 6345
Hooghly Estuary; phytoplankton blooms 6453
Indian Ocean (See also narrower geographic, physiographic and zonal designations ...)
circulation, GCM for hindcasting 3270
SW; circulation, and water properties 3274
N, over; storm forecasting; cyclones, track prediction 3452
metals, Cd, Zn, Ni, Cu 3479
Quaternary, Late; wind, forcing of; monsoon circulation; model results 3576
central; manganese nodules 3676
deep W and S; helium, -3 distribution 3865
SW; climate; weather; variability 3939
SW; convective waves, transient 3975
sediments, pelagic; graphite 4089
SE, accumulation rate in; Holocene; biogenic silica 4105
NE; crustal deformation 4740
Mediterranean Sea; Atlantic; microplankton; ATP, variations in 4828
South Indian Ocean Current; currents 5047
neodymium, isotopes, as tracers; sediments, supply; circulation, paths 5282
Kerguelen-Heard Plateau; sediments, biogenic Si, smectites, plagioclases; in French, English abstract 5296
Central Basin; sediments; lebensspuren; nodules 5302
Central Basin; polymetallic nodules 5444
SW, Walters Shoals; Brachyura, geryonid, new 5549
SW; Isopoda; Serolis, apheles n.sp., and S. antarctica, range extension 5551
W; bathymetric charts, Soviet 5600
South Atlantic; thermocline; water masses, exchange ... 5681
Central Basin; bathymetric surveys 5836
Mauritius, EEZ; phytoplankton, assemblages; pigments .. 5980
W equatorial; surface temperature; 26-day oscillation 6157
Pacific; thermohaline circulation 6166
Pacific; surface heat, balance; El Niño, mature phase 1982-83 6253
SE; South Pacific; tropical cyclones; 1989-90 season 6261
equatorial; Pleistocene, Mid- and Late; paleoceanography 6355
Broken Ridge; carbonate platforms, response; sea level, changes; discussion 6365
adjoining basins; Exmouth Plateau; geomagnetic field ... 6369
W; Anomura; Munida, n.sp., n.description 6498
indicator organisms (More at ORGANISMS ...)
indirect cost rates
universities; research 4347
Indonesia
E; collision tectonics, arc-continent; lithospheric extension, post-collision; discussion 3632
thermocline; mixing 4529
Sunda Arc, -Banda Arc; magma, sources, constraints from He isotopes 4748
Jayapura; debris, anthropogenic, effects; fishermen, subsistence 5610
Indo-Soviet Monsoon Experiment (Use ISMEX)
industry (See also drilling, MINING, offshore-, STRUCTURES ...)
inert gases (More at GAS ...)
inertial currents (More at CURRENTS ...)
inertial oscillations (More at OSCILLATIONS ...)
decay 4418
inertial waves (More at WAVES ...)
fronts, subtropical, in 4475
infauna (More at FAUNA ...)
infauna: benthic
North Sea 6476
infaunal predators
role; community structure, soft-sediment 4246
infaunal recruitment
positive or negative cues? 4259
inflow (More at FLOW ...)
inflows: freshwater
Texas, Lavaca Delta and bay; macrobenthos, effects on 6016
information management (See also data management; more at COMMUNICATIONS ...)
infrared imagery (More at IMAGERY ...)
infrared radiation (More at RADIATION ...)
injection: ocean
carbon dioxide, sequestration 6099
Inland Sea
of Japan; Mexico: Gulf of; zooplankton, and their environment; diel variation 4199

inlets
migration; Florida, East Pass; shoreline dynamics 5264
inlets: estuarine
mouth closures; Decapoda, larval exchanges across; implications of anthropogenic changes in frequency and duration of closures 4982
inlets: tidal
shoreline dynamics, on low drift coasts 5260
insecticides
Penaeidae; Metapenaeus, monoceros; toxicities 4957
insolation (More at solar radiation ...)
influence; North Atlantic; glaciation, effects; atmospheric circulation 5885
instability: baroclinic
fluid dynamics; bottom heating 3404
role; North Pacific, W; currents, energetics 3921
instability: geostrophic
quasi-; fluid dynamics; momentum, wave-energy and pseudoenergy, conservation 5120
instability: shear
waves 4460
installations: production
North Sea; offshore oil; benthos, impacts on 5573
institutions: international
research, ocean, cooperation in; Law of the Sea 4361
instrument networks
climate data, influences on 3425
instrumentation
thermometers, acoustic backscatter; temperature, above the seafloor 3263
fiber-optic microsensors; sediments, light spectra in; irradiance, scalar 4180
sampling, biological; apparatus, oceanographic; catalog of collection in Monaco Oceanographic Museum; in French, English abstract 4353
automatic; water samplers, large-volume 4848
moored, estimation from; irradiance, downward attenuation . 5095
Lagrangian circulation, explorer 5636
data logger and platform; sediment transport, seabed 5833
multisensor, towed; seafloor 6087
portable, shallow-water; sonar, multibeam; KAE fansweep ... 6316
Integrated Global Ocean Station System (Use IGOSS)
intelligence: artificial
genetic algorithms; for strongly nonlinear geophysical optimization problems 3811
interfaces (See also air-sea- and sediment-water interfaces; more at ATMOSPHERE, FRONTS, GRADIENTS, LAYERS, OCEAN, SEDIMENTS, STRUCTURE, ZONES ...)
interfacial waves
instabilities and bifurcations 6212
interglacials
age, duration; sea level, variations 5887
interior fronts
circulation; spontaneous shocks 5679
internal bores
non-dissipative 5710
internal gravity waves
caused by; fronts, thermal; reflections from slope 3892
internal tides
fjords 4474
Suruga Bay; sea level, influence on 5709
Japan, off Fukushima 6213
Sagami Bay; Suruga Bay; currents 6214
Internal Wave Experiment (Use IWEX)
internal waves (More at WAVES ...)
modelling propagation 3319
gravity; mixing 3320
instability near a critical level 3321
gravity; parametric instabilities 3903
Japan: Sea of; shelf, water column and hydrophysical properties 3904
Lomonosov Current, transformation in 4467
inertial-gravity; vertical finestructure generation 4468
effect of near field of a point source on generation 4469
-vortical mode spectrum; energy transfer 4470
instability; shear flow, stratified 4471
and currents; interactions 4472
nonlinearity effects 4473
field, in; flow, effects; surface films 4476
wind; noise, ocean, influence on 4491
as cause; vibrations, seismoacoustic; acoustics 4501
fluid dynamics; Green's function behavior in a compressible medium 4543
generation; fluid dynamics 4544
shelf circulation, response 5083
trenches, in 5084
gravity; scattering off random bottom topography 5711
gravity; fluid dynamics, stratified 5730
gravity; geophysical fluid dynamics, dissipative effects 6204
wakes, ships', in stratified loch 6215
International Association of Seismology and Physics of the Earth's Interior (Use IASPEI)
International Association for Physical Sciences of the Ocean (Use IAPSO)
International Association of Volcanology and Chemistry of the Earth's Interior (Use IAVCEI)
International Council for the Exploration of the Sea (Use ICES)
International Council for the Exploration of the Sea
North Atlantic; retrospective 3817
International Council of Scientific Unions (Use ICSU)
International Decade of Ocean Exploration (Use IDOE)
International Equation of State of Seawater
measurement standards; hydrographic tables; International Oceanographic Tables; Practical Salinity Scale; history 4358
International Geophysical Year (Use IGY)
international institutions
research, ocean, cooperation in; Law of the Sea 4361
international law
North Sea; environmental protection 4986
Mediterranean Sea; pollution, environmental protection; Barcelona Convention 4987
Arctic area; environmental protection 5617
Malaysian National Oil Spill Contingency Plan; pollution, oil spills 5618
Antarctica; ships; pollution, prevention 6117
Caribbean Sea; environmental protection, species and ecosystems 4983
International Oceanographic Tables
measurement standards; hydrographic tables; Practical Salinity Scale; International Equation of State of Seawater; history 4358
International Phase of Ocean Drilling (Use IPOD)
international politics
U.S.; Europe; Japan; global commons; groping for new definition of roles 6520
International Whaling Commission
could end ban; Cetacea; whaling, commercial; policy, and law 6137
whaling, setting catch limits; conservation politics; science and sentimentality 6519
interphyletic communication (More at COMMUNICATION ...)
interstitial communities
Mediterranean Sea; Protozoa, ciliated 5554
interstitial fauna (See also psammon; more at FAUNA ...)
interstitial water (More at WATER ...)
chemistry; Tyrrhenian Sea; sediments 3554
interstitial water samplers (More at SAMPLERS ...)
intertidal communities (More at COMMUNITIES ...)
intertidal macrofauna
organochlorine pesticides; chlordane, effects 4955
intertidal scours
mesoscale; Bengal: Bay of, Indian coast 4074
intertidal sediments
bulk properties 5266
intertidal zone
rocky; predator-prey dynamics; experimental removal of predatory whelks 3741
France, Bay of Mont Saint-Michel; emersion, rates, spatial model; in French, English abstract 3744
sandflats; bedload transport; fauna, passive transport 4072
rocky; macroalgae, effects on; grazing, by limpets 6013
Gastropoda, effects on; oils; dispersants; in Korean, English abstract 6507
Intertropical Convergence Zone (Use ITCZ)
intragenomic selection (More at SELECTION ...)
intrusions (More at FRONTS...)
dynamics; thermohaline stratification; fluid dynamics .. 4548
intrusions: saline
over; Canada, Fraser River Estuary; sediment transport .. 6329

inversions: frontal
atmospheric waves, Kelvin-Helmholtz ... 4599
inversions: thermohaline
finestructure, step-like; water column ... 4537
invertebrate<s> (See also macroinvertebrates; more at FAUNA ...)
invertebrate larvae
energy budgets; seawater, organic composition ... 5972
invertebrates
nectonic; diked marshes; flooding, prolonged, effects of ... 3750
consequences to; parasitism; host evolution ... 4188
algae; metabolic scaling relations, mass transfer explanation .. 4822
invertebrates: epibenthic
scavengers, behavioral ecology ... 6042
iodine
speciation; Black Sea; water column ... 3484
abundances; basalts, oceanic; implications for Earth dynamics 5395
speciation; U.S., SE shelf; fronts, across ... 5825
Ionian Sea
NE, influence; water masses, Atlantic Water ... 3299
ions: atmospheric
Aitken nuclei; Southern Ocean, and polar seas, distribution over ... 6236
ions: metal
interactions during uptake; macroalgae, by ... 4933
IPOD (See also DSDP, JOIDES ...)
Ireland
SW, off; Triassic, and Lower and Middle Jurassic; Fastnet Basin; sediments, stratigraphy ... 4112
offshore; Rockall Trough; crust ... 4158
iridium
-rich layer; Cretaceous-Tertiary boundary; sediments ... 5335
Irish Sea
Celtic Sea; wind-driven circulation; model ... 3271
Celtic Sea; tides, model ... 5692
iron
Black Sea, geochemistry; manganese ... 3511
Black Sea; sulfur, fluxes, origin; carbon, organic ... 3513
cycle; sulfur, cycle; aerosols; cyclic links ... 3989
Weddell Sea; water column ... 3996
limitation, fertilization; nutrients; greenhouse effect, and Leibig's law; relationships ... 4216
limiting?; nutrients; phytoplankton ... 4217
limitation; Pacific, subarctic; productivity, ecosystem; ecological processes ... 4218
phytoplankton nutrition; nutrients; possible importance in regions of low biomass ... 4220
(III); seawater, photoreduction in; spring blooms ... 4849
(II) measurement; Pacific, surface equatorial ... 5179
concentrations; nutrients, high; chlorophyll, low; the case for Fe ... 5205
atmospheric transport, and deposition ... 5218
Southern Ocean; fertilization; productivity; possible biogeochemical consequences ... 5220
atmospheric carbon dioxide; fertilization ... 5225
enrichment studies; phytoplankton, cell division rates ... 5452
hypothesis; Southern Ocean; productivity; ice ages, during 5454
minimum requirements; phytoplankton, 22 spp.; productivity, implications for biogeochemical control ... 5456
Southern Ocean, Weddell-Scotia seawater; manganese; fertilization, experiments; plankton, communities, effects on ... 5459
limitation; Pacific, equatorial; phytoplankton, growth, grazing and sinking rates ... 5461
effects; Antarctica, waters; productivity; phytoplankton . 5476
limited; North Pacific, subarctic; productivity; phytoplankton, ecological dynamics ... 5483
fertilization, design of small-scale experiment ... 5498
acquisition; bacteria, Alteromonas luteoviolaceus; siderophore, production ... 5530
limitation effects; Phaeodactylum, tricornutum; diatoms; photosynthesis ... 5566
iron oxyhydroxides
diagenetic; arsenic, speciation and adsorption ... 4000
irradiance (More at RADIATION ...)
attenuation; seawater, diffuse reflection coefficient ... 3367
scalar; sediments, light spectra in; instrumentation, fiber-optic microsensors ... 4180
in-situ; bioluminescence, estimation ... 4241
net surface solar, variability; Pacific, equatorial ... 4553
solar; surface ... 4554
variations; microalgae, response; photosynthesis ... 4934
downward attenuation; instrumentation, moored, estimation from ... 5095
-mixing regime; Southern Ocean; chlorophyll, maximum; productivity, controls on ... 5486
fluctuations; seawater optics, bio- ... 5496
UV, effect on; Antarctica; stratospheric ozone, depletion . 5772
variable, effects; phytoplankton, productivity; estuaries, shallow ... 5989
irrigation: sediment
rates; measurement ... 5849
island<s> (See also atolls, COASTS; more at LITHOSPHERE ...)
island arc<s> (More at ARCS ...)
island arcs
Caribbean Sea, region; stratigraphy ... 3596
islands
drowned; Galapagos Archipelago; speciation, extended; hotspots, downstream from ... 3575
around; circulation, nearshore; in Japanese, English abstract . 5654
islands: barrier
Lake Erie; sedimentation, history ... 5841
islands: ice
ARLIS-II; icebergs, calving ... 5716
islands: volcanic
Jan Mayen; Norwegian Sea, -Greenland Sea; crust, basal complex petrology, geochemistry ... 5937
Isopoda
Australia, SE; Cirolanidae, new records ... 3773
Australasia; Limnoriidae ... 3777
idoteid; Synisoma, wetzerae n.sp., and first record from New World ... 3784
cirolanid; Caribbean Sea, off Colombia; Metacirolana, n.sp., redescription ... 4292
Indian Ocean, SW; Serolis, apheles n.sp., and S. antarctica, range extension ... 5551
Weddell Sea; Ceratoserolis, egg size and composition ... 6046
distribution; Weddell Sea, E ... 6050
isostasy (More at SEA LEVEL, TECTONICS ...)
relative to; China, coast; sea level, change ... 6328
Israel
Cretaceous-Tertiary boundary, stratigraphy across; Dinoflagellata; calcareous nannofossils ... 5322
litter; shorelines ... 5605
Israelites
crossing; Red Sea, parting of; Suez: Gulf of; an oceanographic explanation ... 5013
IWC (Use International Whaling Commission)
Izu-Bonin Arc
lava, chemistry; subduction, components ... 5405

Jan Mayen Current
Greenland Sea; currents ... 5667
Japan
Early Miocene Koura Formation; marginal basins; sedimentation, volcaniclastic ... 3592
northern Honshu; Cenozoic, Late; sedimentary basins, development; tectonics; volcanism; relationships ... 3603
beneath; Philippine Plate; Pacific Plate; plate motions, relative, and geometry ... 3633
Hokkaido; lavas; hyaloclastites; morphological and sedimentological characteristics ... 3650
Minamata Bay; mercury pollution; what we have learned since ... 3822
dating, ESR, and thermal behavior; quartz, Al and Ti centers 4057
Banda coast; surface temperature; interdiurnal variation; in Japanese, English abstract ... 4387
Hokkaido coast; nutrients, seasonal changes in concentrations; in Japanese, English abstract ... 4631
off Tohoku and Hokkaido; Sagami Bay; sediments, forearc 4656
off Sanriku, and Oyashio Water; Copepoda; zooplankton, distribution; in Japanese, English abstract ... 4841
waters around; rings, warm-core, and streamers; role in fishing ground formation ... 4999
Tamagawa Estuary

removal from; alkylbenzenes, linear alkylbenzenesulfonates . 5236
Mutsu Bay; sedimentation, processes; pelletization, role .. 5280
SW; Paleozoic, Late, to Early Mesozoic; Pacific, circum-; Korea, South; tectonics, orogenic belt evolution 5373
Sagami Bay; Copepoda, poecilostomatoid; Hyphalion, sagamiense n.sp. 5552
islands; metamorphic belts 5938
off; fronts, tructure; Kuroshio 6192
off Fukushima; internal tides 6213
Hokkaido; Holocene; crust, tilting; tectonics 6424
elemental compositions; vent fauna; seep communities; in Korean, English abstract 6474
biodiversity; conservation; corals, hermatypic 6493
U.S.; Europe; international politics; global commons; groping for new definition of roles 6520

Japan Arc
Okushiri Ridge as example; ophiolites, emplacement initiation 5431

Japan: Sea of
during winter monsoon; wind waves, growth; fetch, with ... 3309
DUPAL anomaly; volcanic rocks; Pb, Nd, and Sr isotopic variations 3666
internal waves; shelf, water column and hydrophysical properties 3904
over; clouds, convergent bands 3977
N, over; clouds, convergent bands 3978
Yamato Basin; seismic waves, velocity 4144
Mysidacea; Meterythrops, microphthalma 4285
Ascidiacea 4913
Yamato Basin; basalt sills, petrology 6403
Yamato Basin; seismic anisotropy; crust 6411
Yamato Basin; crust, velocity structure 6412

JEBAR
currents, field; fluid dynamics, interpretations 4546

Jerlov meter (More at METERS ...)

jet drops (More at DROPS ...)

jets (More at CURRENTS ...)
meandering; fluid exchange 5113

jets: contaminant
surface layer, spreading in 6516

jets: current
circulation 4570

Johnston Atoll
distribution around; Pacific; fish larvae 5455

JOIDES (See also DSDP, IPOD ...)

Joint Air-Sea Interaction Experiment (Use JASIN)

joint effect of baroclinicity and relief
currents, field; fluid dynamics, interpretations 4546

Joint Oceanographic Institutions for Deep Earth Sampling (Use JOIDES)

Joint U.S./U.S.S.R. Mid-Ocean Dynamics Experiment (Use POLYMODE)

Joseph Bonaparte Gulf
Australia, NW; sedimentation, terrigenous 5276

Juan de Fuca Ridge
hydrothermalism, discharge volume; magma, budget 4680
hydrothermal plumes; suspended matter, tracking via ... 4682
sulfide deposits, massive; hydrothermalism 5311
Guaymas Basin; manganese, biochemistry; metals, fluxes; hydrothermalism, areas of 5314
spreading ridges; event detection 5378
Gorda Ridge; basalts, MORB geochronology and petrogenesis; erratum 5927
Axial Volcano; heat flux; hydrothermal vents, areas ... 5934
Middle Valley; hydrothermal petroleum; sediments; organic matter, alteration 6351

Juan Fernandez Plate
microplate, evolution; tectonics 5380

Jurassic
Africa, NW corner; sediments; tectonics, evolution 3580
Cretaceous; South Pacific, E; Tethys; marine connections 3600
Late; Cretaceous; Pacific, Tethyan 3610
Upper; North Atlantic, Blake Bahama Basin; calcareous nannofossils 3617
Mid-Late; Cretaceous; Tethys; Brachiopoda, biogeography; fossil record, in relation to tectonic and paleoceanography 3618
proto-Atlantic seaway; Bahamas, -Grand Banks gigaplatform; carbonate platforms, giga- 4739
Middle; North Sea, Brent Group; magnetic field, stratigraphy 5325
Middle; North Sea, Brent Group; sediments; paleomagnetism 5360
Late, to Early Cretaceous; Pacific, W central; magnetic field, anomaly lineations 6372

Kamaka
taditadi, n.sp.; Papua New Guinea; Amphipoda, corophioid 3787

Kamchatka
and Komanorsky islands; Paleogene; paleomagnetism; tectonics 4710

Kamchatka Peninsula
E, Kemroch Ridge; magmatism, oceanic 3642

kaolinite
clay minerals 4026
distributions, implications; Paleocene, and Eocene; South Atlantic; Southern Ocean; clay minerals 5339

karsts
reef carbonate, Tunisia; rare earths; mineralization, secondary; basalts, North Atlantic 4687

katabatic wind
evolution; Antarctica, coastal zone 5752

Kattegat
southern; phytoplankton, distribution, production 4225
bromoform, natural and anthropogenic 4641
1988; Chrysochromulina, polylepis; phytoplankton blooms 4845
sediments; carbonate cementation 5275
SE; eutrophication; carbon, budget and energy flow 6445

kelp (More at ALGAE ...)
deep occurrence; Southern Ocean; Macrocystis, laevis ... 6061

kelp beds
Ecklonia, radiata; fauna, on holdfasts; monitoring the shallow sublittoral 4959

kelp: drift
role; Polychaeta, ecotone; Diopatra, ornata, population ecology 6041

Kelvin waves
equatorial; Pacific; sea level, as monitor 4435
evolution in nonuniform ocean 4449
double; fluid dynamics, viscous, diffusive; properties 4551

Kenya
Rift, northern; East African Rift, system; tectonics, evolution 5382

Kerguelen Archipelago
algal pigments, diversity; sediments, coastal 3795

Kolbeinsey Ridge
sediments, composition, origin 3551
Iceland, N of; basalts, MORB, isotopic evidence against mixing with plume 3662

Korea
Cheju Island harbors; phytoplankton communities, dynamics; in Korean, English abstract 4852
Ulleung Basin; East Sea Intermediate Water; water masses; in Korean, English abstract 5051
around Cheju-Do; water masses; circulation; in Korean, English abstract 5052
Chinhae Bay; nutrients; oxygen, dissolved; annual cycles ... 5203
Keum Estuary; channel flow; sediments, dispersal 5267
South; Paleozoic, Late, to Early Mesozoic; Pacific, circum-; Japan, SW; tectonics, orogenic belt evolution 5373
Southern Sea; primary production 5464
East Sea; temperature, vertical structure; water collumn; currents; in Korean, English abstract 5642
East Sea; water column; currents; water masses, chemistry; in Korean, English abstract 5687
adjacent to; water column; currents; in Korean, English abstract 5688
E coast, off; phytoplankton, community structure, distribution 5994
Gyeonggi Bay; tidal currents; boundary shear velocities 6176
Chinhae Bay; nickel, dissolved, speciation 6282

Korea Strait
Pleistocene, lowstands, during; sediments, deposition 4697

KREEP (Use basalts: KREEP)

kriging
in marine ecology; Decapoda; Pandalus, borealis; sampling, and mapping; biomass, estimation 4816

krill (More at SHELLFISH ...)
Euphausia, superba, seasonal growth and mortality; South Shetland Islands, Admiralty Bay 4290

Southern Ocean; Euphausiacea; spawning, season 4291
fisheries management; Antarctica; living resources 4341
fisheries management; Commission for the Conservation of Antarctic Marine Liveing Resources 4342
Antarctic; Euphausia, superba; marginal ice zone 4919
Antarctic; zooplankton, swarms; biological and acoustic characteristics 4926
Antarctic; fisheries management 4979
Weddell Sea; Scotia Sea; fecal pellets; particle flux, role in 5813
diet effects; particles, fecal string settling 6045
distribution, biomass; Algoa Bay; Euphausiacea; Nyctiphanes, capensis 6047
sexual development; Weddell-Scotia Sea 6048

Kuril Arc
Mariana Arc; mantle, high-velocity zones; earthquakes, deepest, beneath 5955
volcanic rocks, effusive; isotope geochemistry 4788

Kuroshio
eddies, warm-core, evolution 3919
structure; Kyushu, SW of; currents 4406
rings, warm-core 4421
organic matter, particulate; rings, warm-core; N and C isotopics 4636
Salpidae, distribution, growth; rings, warm-core 4870
Gulf Stream; rings, warm-core; eddies; workshop collection 4968
variation 1986-88; currents; meanders 5663
Extension; currents, XBT surveys and satellite data compared 5670
East China Sea; Ryukyu Islands, E of; currents 5677
warm filament; currents; Tsushima Warm Current 5682
Japan, off; fronts, tructure 6192

Kuwait
and environs; Persian Gulf; environmental impact; war, aftermath; remote sensing data sets 3830
and Arabian coasts; oil pollution; AVHRR monitoring 4975
fires, postwar; oil smoke; atmosphere, effects 5783

Kyushu
SW of; Kuroshio, structure; currents 4406

laboratories
Seto Marine Biological Laboratory; type specimens, zoological, inventory 4969
intercomparison exercises; trace analysis; ICES 5229

Labrador
off; Newfoundland, E, off; ice, edge, melt rates 3353

Labrador Current
zooplankton; patchiness, decay; wind, due to 5495

Labrador Sea
geomorphology; sediments, deep-sea channel/submarine yazoo system; bedforms 5249
rift zones, extinct axis; crust, structure 5430
Pleistocene, plankton and pollen records; ocean-atmosphere interactions; climate change, responses to 5879

lagoon<s> (More at COASTS ...)

lagoon communities (More at COMMUNITIES ...)

lagoons
tropical; Mexico, Cancun; oxygen, dissolved, diel dynamics; eutrophication 4011
backreef; Caribbean area; circulation 5031
in; phytoplankton biomass; wind-induced hydrodynamic control 5991

lagoons: coastal
France, Thau Lagoon; phytoplankton, population spatial organization; in French, English abstract 3711
zooplankton communities; spatial restructuring and hydrodynamics; in French, English abstract 3713
Brazil; trophic dynamics, and water turnover time 3803

Lagrangian circulation
explorer; instrumentation 5636

Lake Erie
barrier islands; sedimentation, history 5841

lake macrophytes
epifauna; phytoplankton 6058

Lake Mpungwini
Africa, S; sulfur, biogeochemistry 4644

Lake Nyos
Africa, West; degassing, to prevent catastrophic effervescence; carbon dioxide, dissolved 4370

lakes
water level changes; Antarctica, Lake Hoare; ice, cover thickness changes; climate, local 4565

Lancaster Sound
shear edge; icebergs, ridge-sail characteristics 3357

land breezes (More at BREEZES ...)

Langmuir circulation (More at CIRCULATION ...) 5034
vorticity 5114

larvae: fish
Johnston Atoll, distribution around; Pacific 5455

larvae: invertebrate
energy budgets; seawater, organic composition 5972

larval dispersal
coral reefs, geomorphology; currents, prevailing 4081

larval recruitment
Mya arenaria; sediment transport, bedload 4248

larval settlement
Caribbean area; Barbados; corals, scleractinian 3749
particulates, micro-; sedimentation; fluorescent label for visualization 4181
barnacle; bacterial films; inhibition investigated 4891
Ascidiacea, colonial 5509
Balanus, improvisus; salinity, and adult extract, interactive effects 6040

laser scanners
glint measurement method; surface roughness, anisotropy .. 4382

Last Glacial Maximum
during, increased production; Pleistocene, end; beryllium, -10, cosmogenic 6356

laterites (More at SEDIMENTS ...)

Lau Basin
North Fiji Basin; basalts, MORB; interpretation of bathymetric data and photographs 5244
North Fiji Basin; South Pacific, W; hydrothermalism; tectonics, and geological evolution 5245
sediments, geochemistry 5289
core; thorium, depth profile; sediments 5293
North Fiji Basin; sediments; calcareous ooze, volcanic ash, metalliferous deposits 5300
North Fiji Basin; sediments; pumice, and ash layers, composition and origin 5305
sediments, geochemistry 5306
hydrothermal deposits; nontronite geochemistry 5312
North Fiji Basin; hydrothermal mineralization 5315
North Fiji Basin; hydrothermalism; geological evolution . 5316
Foraminifera; oxygen, isotope stratigraphy 5345
North Fiji Basin; sedimentation, rates; productivity, paleo-; stable isotope stratigraphy 5348
North Fiji Basin; magnetic field, anomalies 5362
volcanic rocks; geochemistry 5392
volcanic rocks, glasses; composition 5394
volcanic rocks, petrology 5396
North Fiji Basin; volcanic rocks, origin, alteration 5406
ODP Leg 135; backarc basins, evolution; tectonics 6384

lava (More at BASALTS ...)
basalt to rhyodacite suite; Pleistocene, Mid-; Aleutian Arc, Seguam volcanic center 5400
chemistry; Izu-Bonin Arc; subduction, components 5405
Pliocene; Pleistocene; Iceland; sediments; glaciation and climate record 3579
Japan, Hokkaido; hyaloclastites; morphological and sedimentological characteristics 3650
Philippine Sea; magma, implications of origin 3643

law (See also EEZ; more at GOVERNMENT, POLICY ...)
U.S., Oil Pollution Act; oil spills; pollution 4985

law: international
Caribbean Sea; environmental protection, species and ecosystems 4983
North Sea; environmental protection 4986
Mediterranean Sea; pollution, environmental protection; Barcelona Convention 4987
Arctic area; environmental protection 5617
Malaysian National Oil Spill Contingency Plan; pollution, oil spills 5618
Antarctica; ships; pollution, prevention 6117

Law of the Sea
international institutions; research, ocean, cooperation in . 4361

layers (See also BOUNDARY LAYERS; FRONTS, GRADIENTS, INTERFACES, ZONES; more at ATMOSPHERE, LITHOSPHERE, OCEAN, SEDIMENTS ...)

leaching
chemical; pelagic sediments; cerium, anomaly, carrier 6346
lead
transport; North Sea; suspended sediments, dispersion ... 4051
Fundy: Bay of; seston, partitioning in; cadmium 4637
relationship with; hydrocarbons, PAHs; aerosols, anthropogenic influences 5171
-210; South China Sea; Huanghai Sea; Bohai Sea; in Chinese, English abstract 5291
bioavailability; North Sea; sediments 5572
leads: ice
over; Arctic Ocean, pack ice; atmospheric convection, buoyant 6220
Lebanon
waters off; plankton; structure and interannual fluctuations; in French, English abstract 3715
lebensspuren
Indian Ocean, Central Basin; sediments; nodules 5302
lee waves
Florida, S of Key West; ADCP measurements 5708
Leeuwin Current
observations, models; Australia, W; currents 3871
for; Australia, W; climate change, implications 3881
activity; Australia, W; carbonate platforms, Abrolhos, evolution 4108
Humboldt Current; Benguela Current; currents, major; zoogeography, provinces 4187
in relation to; seabirds, abundance, distribution, breeding patterns 4263
coral reefs; ecological perspective 4362
influences; Australia, Western; currents; coastal zone, climate, biota; symposium 4366
legal regimes
North Sea 3838
Lembos
fuegiensis, argentinensis, n.spp.; Argentina; Amphipoda, aorid 3769
lenses
formation and evolution; Mediterranean Sea, water; eddies, intrathermocline 4426
lenses: saline
Mediterranean Sea, from 5107
Lessepsian migrations
Suez Canal; biogeography; in French, with English abstracts, 6 papers; 7 p 3687
Lesser Antilles
Martinique; volcanism, evolution; petrogenetic implications 6398
Arc, 1981-88; seismicity, shallow; subduction zones; earthquakes; in French, English abstract 6419
lidar
polarization lidar technique; clouds, research; review and current assessment 3447
light intensity distribution in the image plane; surface, soundings 4380
life
universe, contributions from 5012
life: origin of
organic molecules; endogenous production, exogenous delivery, and impact-shock synthesis; review 3847
light (See also color, optical-, sunlight; more at RADIATION. For atmospheric and oceanic optical properties see also AIR, ATMOSPHERE, OCEAN, seawater, WATER ...)
parallel beam reflections, intensity fluctuations; surface 3366
diffuse attenuation coefficient; turbid estuaries 3369
utilization efficiencies, measurement variability; photosynthesis 4229
field; seawater; characteristics 4483
attenuation coefficients; surface films 4484
natural conditions; seawater, visibility in; theory 4485
limitation; Southern Ocean; phytoplankton, biomass; nutrients, macro-, utilization 5484
limitation; nutrients; algal blooms; coagulation, effects .. 5984
light field
approximations 3368
light scattering
microbiota 3764
functions 4486
coefficient; profile determinations 4488
particulates, by 4638
Prorocentrum, micans; new method 5721
bacteria, heterotrophic 6490
lignin
amino acids; carbohydrates; sediments, compositions in . 5803
determinations; sediments 6287
Ligurian Sea
benthic communities; detritus, off cliffs 4882
and Tyrrhenian; Porifera; sponges, distribution, ecology ... 4892
zooplankton, deep-water 5479
frontal areas; microbiota, planktonic; flagellates, nanno-, pico-; contributions to ETS activity 6488
Limacina
helicina, midsummer diet; Arctic Ocean; Gastropoda 3766
limestone<s> (More at CARBONATES ...)
limestone precipitation
seawater; building materials, innovative; carbon, sink for . 6144
Limnoriidae
Australasia; Isopoda 3777
Linuche
unguiculata; Scyphomedusae; novel form of clustering behavior 4851
Lion: Gulf of
Valencia Trough; crust, seismic profiles 6425
Rhone Delta; selenium, distribution 3994
lipids
biomarker approach, trends in; organic matter, biogeochemistry 4015
Spartina, selective alteration; Orca Basin; anoxic sediments 5221
liquefaction
potential; sediment failures, in submarine slopes 5848
momentary; seabed, wave-induced stress 6102
liquefied natural gas (Use LNG)
liquid nitrogen (More at nitrogen ...)
lithium
sources in pore fluids; Peru; slope sediments 4643
isotopic composition; basalts, submarine; seawater, Li cycle . 4742
lithosphere (See also ARCS, BASINS, COASTS, CONTINENT-, CRUST, diapirs, domes, FAULTS, FLOOR, FRACTURES, geosynclines, hot spots, ISLANDS, PLATES, RIDGES, RIFTS, seamounts, SHELF, STRUCTURES, subduction zones, TECTONICS, trenches, triple junctions, volcanoes; more at EARTH ...)
stress, strength, viscosity; crust; seismology; symposium 4151
Arabian Plate, NW, beneath 4781
seismic properties; North Pacific, W 4786
DIANAUT, program; boreholes, DSDP 5240
Pacific; magnetization 5368
thickness; plate motions; mantle, upper, dragging; deformation, intraplate, implications for 5921
dynamics; Mesozoic, evolution; Spain, Betic rifted margin; tectonics 6430
lithosphere: continental
extended; mechanical strength 3655
subduction, thermomechanics 5432
lithospheric buckling
crust, long-wavelength undulations 6408
lithospheric extension
post-collision; Indonesia, E; collision tectonics, arc-continent; discussion 3632
lithospheric flexure
crust, stress; tectonics 4785
Spain, SE, Betic Cordillera; tectonics, evolution 6388
lithospheric heat flow
Mallorca, and Menorca; Mediterranean Sea, W 6375
Valencia Trough, geodynamics 6376
lithospheric plates
formation; mantle, dynamics; influence of depth-varying rheologies 3638
structure; Pacific, plate thickness implications 6441
lithospheric rheology
oceanic, revised estimate 5946
lithospheric stress
cooling, produced by; crust 4153
litter
Israel; shorelines 5605
persistent; Nova Scotia, Sable Island; pollution monitoring 5609
littoral biota (More at BIOTA ...)
littoral zone
medio- and infra-; Mediterranean Sea, Balearic Islands; Polychaeta, communities, relationship to plant covering . 4895
Littorina
2 spp.; Gastropoda, life histories; predation, effects 6022

Liverpool Bay
sediments; arsenic; mercury 4043
living resources
Antarctica; krill, fisheries management 4341
LNG (More at GAS ...)
lobsters (More at SHELLFISH ...)
locomotion
swimming, wave-riding; Cetacea; dolphins, bottlenose 6010
Lomonosov Current
transformation in; internal waves 4467
Long Island Sound
sediments, resuspension rates 3538
long waves (More at WAVES ...)
Longhurst frame (More at OCEANOGRAPHIC APPARATUS ...)
longitudinal dispersion (More at DISPERSION ...)
longshore currents (More at CURRENTS ...)
shear, instabilities; theory, observations 3916
shear instability 5673
longshore drift
Florida, NW; Alabama, SE; sediments, multiple sources .. 5845
Loop Current
Mexico: Gulf of; eddies, evolution, kinematics 3874
Mexico: Gulf of, W; rings, collision with slope; currents .. 3883
Lophelia
pertusa; North Atlantic, Faroe shelf; Scleractinia; corals, bank-forming, deepwater; fauna, associated 6473
Louisiana
nutrient transport; bayous 4021
Spartina, alterniflora; marshes, salt, deteriorating; relationship among topography, hydroperiod, and growth 4261
Cocodrie; Harpacticoida, associated with Spartina 4282
Love waves (More at WAVES ...)
luminescence (See also cathodoluminescence ...)
luminometers
90 surveyed; bioluminescence; chemiluminescence 5596
lunar science
Moon; 20 years after Apollo; commemorative section 3848
Luzon Arc
collapse; Miocene, -Pliocene; Taiwan, E, evidence from; collision tectonics 5375
lysocline (More at GRADIENTS ...)
depth, shape; Pacific, equatorial; calcite, preservation cycles . 3572

Macquarie Ridge
earthquakes, 1989; faults, reactivation 5944
macroalgae
temperature responses and distribution; Mediterranean area, -warm Atlantic group 4308
5 spp.; nitrogen, tissue; phosphorus, tissue; seasonal fluctuations 4932
by; metal ions, interactions during uptake 4933
irradiance, salinity, desiccation effects; Florida, Keys 5562
deep-water; Bermuda; Dictyotales; photosynthesis 5564
effects on; intertidal zone, rocky; grazing, by limpets 6013
in siliciclastic vs carbonate-rich waters; nutrients, availability . 6059
potential use; carbon dioxide, sink; seaweed farming 6303
macroalgae: benthic
banks of microscopic forms, analogy with seed banks 4936
macrobenthos (More at BENTHOS ...)
bathyal, abyssal; Norwegian Sea; ecology and bathymetry .. 3748
North Sea 4885
and meiobenthos, in microcosms; predation, effects 4896
Arabian Gulf, Dubai Creek; sewage outfalls, near 4950
subtidal, long-term trends; South Carolina, North Inlet 5514
effects on; Texas, Lavaca Delta and bay; freshwater inflows 6016
Macrocystis
laevis; Southern Ocean; kelp, deep occurrence 6061
macrofauna (More at FAUNA ...)
sympagic, distribution; Barents Sea 3716
sympagic; Svalbard, near; sea ice 3717
soft substrate; Aegean Sea, N 4889
North Sea, S; sediments, sandy; trawling, beam-, effects .. 5504
biomass, density, diversity; North Sea 5507
swash features role; sand beaches, ecology 5511
Brazil, Paranagua Bay; plant biomass; marshes, salt, interactions in 5517
by; Florida, Rookery Bay; mangroves, comparative habitat utilization in 5518

macrofauna: benthic
New Zealand, Wellington; sewage, and natural seasonal disturbances, effects 4940
German Bight 5505
India, SE coast, Cuddalore-Uppanar backwater 6018
China, Jiulong Estuary intertidal zone; in Chinese, English abstract 6023
macrofauna: intertidal
organochlorine pesticides; chlordane, effects 4955
macroinfauna
communities; California, Santa Maria Basin 4250
macroinvertebrates (More at invertebrates ...)
macrophytes (More at FLORA ...)
macrophytes: benthic
Black Sea, Romanian coast; algae; annotated bibliography .. 3793
macrophytes: lake
epifauna; phytoplankton 6058
macroplankton
deep-sea, contributions; Madeira Abyssal Plain; zooplankton; mineralization, re-, organic 4850
Madagascar
fragment of Dharwar craton of India; plate tectonics 5918
Madeira Abyssal Plain
macroplankton, deep-sea, contributions; zooplankton; mineralization, re-, organic 4850
maelstroms (More at vortices ...)
Magellan: Strait of
hydrology; water masses; mixing 6154
currents 6182
suspended matter; particulates, distribution, chemistry ... 6295
sediments, and sedimentary processes; deposition 6337
sediments, fine fraction mineralogy 6344
phytoplankton, populations 6451
Project; sediments; water column, hydrography; circulation 6511
magma (More at IGNEOUS ...)
implications of origin; Philippine Sea; submarine lavas ... 3643
parental composition, importance; Aleutian Arc; basalts, calc-alkaline, tholeiitic evolution 3645
tholeiitic; hydrogen, isotope composition; water, geochemistry 3648
budget; Juan de Fuca Ridge; hydrothermalism, discharge volume 4680
sources, constraints from He isotopes; Indonesia; Sunda Arc, -Banda Arc 4748
petrogenesis, implications for; Mariana Arc; sediments, trace element and isotopics 5398
Aleutian Arc; petrogenesis 5402
contributions; hydrothermalism, systems 5876
melt segregation; basalts, tholeiitic, petrogenesis 5926
primary; basalts, MORB; experiments, methods 5929
primary; basalts, MORB; applications 5930
petrogenesis; California, N; spreading centers, fossil; ophiolites, Trinity 5932
magma chambers
mid-ocean ridges 3647
processes, petrology; East Pacific Rise 5923
mid-ocean ridges 6134
magmatism
oceanic; Kamchatka Peninsula, E, Kemroch Ridge 3642
evolution; Tethysides; orogenies; tectonics 3646
within-plate; Tonga Trench, slopes 3651
Oligocene, to present; Red Sea, E margin, N Yemen 4138
plate tectonics; hotspots; mantle 6390
South China Sea, Basin, Hainan Island; basalts, post-spreading Quaternary 6399
Cenozoic; Valencia Trough; volcanism, and structural evolution, relationship 6402
South China Sea, Basin; mantle, evidence for endogenous Dupal component 6404
magnesium
calcium; simultaneous spectrophotometric determination 3488
India, E, Hooghly Estuary; calcium; semiconservative behavior 5821
magnetic<s> (See also geo- and paleomagnetics; remanent magnetism ...)
magnetic field
detailed survey; Mid-Atlantic Ridge, 23-26°N 4118
data; Red Sea; Atlantis II Deep; hydrothermal and geodynamic interpretation 4122
paleointensities; paleomagnetism 4127
geodynamo, theory; core 4711
reversals, secular variation, dynamo theory 4714

Arabian Sea, E, Prathap Ridge complex ... 4718
paleointensity and reversal frequency; no demonstrated relationship ... 4721
superplumes; superchrons; mantle plumes; report ... 5001
implications; core, thermal history ... 5002
reversals; geomagnetism; no link established with plate tectonics ... 5005
stratigraphy; Jurassic, Middle; North Sea, Brent Group ... 5325
polarity time scale; Eocene-Oligocene boundary; Ar-dating, magnetochronology ... 5361
anomalies; Lau Basin; North Fiji Basin ... 5362
isochron chart; Mesozoic; North Pacific, W ... 5914
Tyrrhenian Sea; seamounts, Magniagi ... 6370
anomaly lineations; Jurassic, Late, to Early Cretaceous; Pacific, W central ... 6372
anomalies; Mesozoic; Canary Basin; North Atlantic, central, evolution ... 6373
anomalies, anomalous skewness; seafloor spreading, rate, dependence ... 6374

magnetic poles
seeking them; history of science ... 3619

magnetism (More at GEOMAGNETICS ...)
rock; geomagnetic field; paleomagnetism; research in magnetostratigraphy and paleointensity; collection ... 5357
rock; Neogene, Late, and Pleistocene; sediments ... 5359

magnetism: rock
paleomagnetism, global database ... 5366

magnetization
highs; spreading centers; basalts; discontinuities, associated with ... 3621
high temperature viscous, as source for Magsat anomalies; crust; mantle ... 4126
influence on; sediments, moisture content ... 4719
processes; Cyprus, Troodos; crust; ophiolites ... 4765
Pacific; lithosphere ... 5368

Maine: Gulf of
host-epiphyte interactions; epiphytes; variation along a wave exposure gradient ... 3794
during April 1987 100-yr flood; suspended sediments, discharge ... 4077
Alexandrium, tamarense; toxic blooms; currents, alongshore transport in ... 4201
SW; toxic blooms; phytoplankton ... 4202
nepheloid layers, structure, biological activity ... 4869
geostrophic flow ... 5649
E; Passamaquoddy Bay; tides, and tidal power simulations; circulation ... 5691

Malaysia
Johore Strait; fouling communities, ecology ... 3751
Johore Strait; pollution management, and control ... 3826
Sabah; red tides, toxic, effects of meteorological factors ... 4871

Malaysian National Oil Spill Contingency Plan
international law; pollution, oil spills ... 5618

Mallorca
Serra de Tramuntana; crust, structural outline ... 6321
and Menorca; Mediterranean Sea, W; lithospheric heat flow ... 6375

mammals: marine
marine; Weddell Sea; seabirds; spring distributions and ecological role ... 3685
research; Arctic area; remote sensing, AVHRR imagery ... 4177
Micronesia; annotated checklist ... 4819
research; polar seas ... 4874
management organizations; Alaska ... 6125

management
strategies; Pinnipedia, Mediterranean monk seal; Monachus, monachus; biomonitoring ... 6517

management: environmental
marine; decision making ... 4984

management: fisheries
krill; Commission for the Conservation of Antarctic Marine Liveing Resources ... 4342
yield per recruit analysis; gear selectivity ... 4343
krill, Antarctic ... 4979
risk assessment; sources of uncertainty ... 4980

management: pollution
and control; Malaysia, Johore Strait ... 3826

management: sea use
and planning; North Sea ... 3836
and planning; North Sea ... 3837

manganese
seawater; trace analysis ... 3469
Black Sea, geochemistry; iron ... 3511
oxidation; Black Sea; redox interface ... 3515
microbial reducing potential; Black Sea; bacteria, Mn-reducing, isolation and identification ... 3761
adsorption on calcareous surfaces; English Channel; seasonal variations, implications ... 4007
dissolved, spectrophotometric determinations; seawater, hydrothermal plume ... 4618
compounds; Seine River, and estuary; particulates, free radicals in; ESR investigations ... 5206
biochemistry; Juan de Fuca Ridge; Guaymas Basin; metals, fluxes; hydrothermalism, areas of ... 5314
Southern Ocean, Weddell-Scotia seawater; iron; fertilization, experiments; plankton, communities, effects on ... 5459
deposition; hydrothermalism, ridge crest ... 5874
distribution; Taiwan, NE, off; water column; in Chinese, English abstract ... 6279

manganese crusts
growth rates; Quaternary, Late, during; climate, influences ... 5966
formation; benthic recruitment; seamounts ... 6524

manganese nodule<s> (More at NODULES ...)

manganese nodule mining (More at MINING ...)

manganese nodules
Pacific; rare earths ... 3675
Indian Ocean, central ... 3676
minerals, Mn-bearing; metals, elemental; relationships ... 3677
compositional evolution ... 4806

mangroves
comparative habitat utilization in; Florida, Rookery Bay; macrofauna, by ... 5518

Manokwari Trough
New Guinea Trench; sediments; crust ... 4733

mantle (See also hotspots; more at EARTH ...)
dynamics; lithospheric plates, formation; influence of depth-varying rheologies ... 3638
creep, implications for; rheology, high temperature, of enstatite ... 3660
crust; magnetization, high temperature viscous, as source for Magsat anomalies ... 4126
core; density, estimation precision ... 4142
upper; seismic discontinuities, 520-km ... 4145
water; minerals, anhydrous, role ... 4755
upper, attenuation in; seismic waves ... 4770
upper, velocity structure; Mediterranean area ... 4773
North Atlantic; seismic anisotropy ... 4774
heterogeneity; Mid-Atlantic Ridge, beneath ... 5412
transition zone; Pacific, W; subduction, subducting slabs stagnant ... 5419
exposed; South Pacific; volcanism; crust; faults, Garrett transform ... 5423
upper, dragging; plate motions; deformation, intraplate, implications for; lithosphere, thickness ... 5921
sources; Bonin Arc; Solomon Islands; volcanic rocks, Ce and Nd isotopics ... 5935
transition zone; petrology, elasticity, composition ... 5951
high-velocity zones; Kuril Arc; Mariana Arc; earthquakes, deepest, beneath ... 5955
plate tectonics; hotspots; magmatism ... 6390
fragmentation due to hot upflow; Gondwana, W; crust ... 6391
evidence for endogenous Dupal component; South China Sea, Basin; magmatism ... 6404
water storage implications; hydrogen, solubility; olivine, in ... 6406
refertilization; peridotites, abyssal, chemical trends ... 6417

mantle convection (More at CONVECTION ...)
models ... 3657
subduction, history ... 3665
numerical models ... 4166
subduction, effects ... 4792
thermodynamical response ... 5418
tectonics, dynamics ... 5945
hotspots, distribution ... 5962

mantle fluids
thermal convection; numerical simulations ... 3663

mantle minerals
water, content ... 6526

mantle mixing ... 5953

mantle outgassing
magma; basalts, MORB glasses, He and Ar in ... 3649

mantle plumes
geoid, anomalies; dynamic topography; convection structures, applications to Earth and Venus ... 3659

Cretaceous, Mid-; climate warming, major; hotspots 3840
Tasmantid Seamounts; shallow melting and plume contamination 4135
geomagnetic field, reversal frequency 4156
geomagnetic field, reversal frequency; correlation 4157
South America, Parana; Africa, Etendeka; volcanism, basaltic; rifting, mechanics of 4747
superplumes; superchrons; magnetic field; report 5001
tectonics, continental 5387
Cretaceous, Mid-; discussion of superplumes 5420
and entrainment 5422
hotspot volcanism 5936

mantle rheology
geodynamical processes 3652
seismographs 5629

mantle topography
mapping the 660-km discontinuity 5957
400-km discontinuity 6427

mapping
cartographic generalization; computer software 5601

mapping: acoustic
seafloor 4496

maps
geological, world's oldest; Egypt, the 1150 B.C. Turin Papyrus . 5621

mare sporco
episodes; Adriatic Sea, N; climatological aspects of occurrence 3428

margin
segmented continental; Turonian, and early Senonian; Tethys, African; carbonate platforms, evolution 3574
processes; Tethys; rifting 3636
active processes; Antarctic Peninsula 4731
divergent, formation; U.S.; North Atlantic, coast 4734
evolution; Mesozoic; Australia, NW; Himalayas, northern 4736
evolution; Mesozoic; Cenozoic 4738
divergent; Pangea; rift zones 4741
extensional; Voring Plateau; magmatic-tectonic evolution ... 4745
passive; Texas, Gulf coast; basement; deep structure 4758
Canadian polar; Axel Heiberg Island, NW of 4764
morphology; Colombia; Caribbean Sea; in French, English abstract 5246
accretionary; Caribbean Plate, morphology, structure; plate boundaries, development; tectonics 5374
geomorphology; Guinea Plateau, SW; tectonics, and currents, influences 5839

margin sediments
and adjacent deep-sea; Cenozoic, geology; Europe, NW 3679
Quaternary, Late; Egypt, NW Nile Delta; terrigenous-carbonate interface 4076
Great Bahama Bank 4085
loading by; New Zealand, Western Platform; crust, strength implications 4097
Cenozoic; Antarctica; record of glacioeustatic and tectonic events 4730
Tertiary, Late; Mediterranean Sea, off Israel 5865

margin tectonics
passive; Red Seas and central; Antarctica, Wilkes Land, comparison to 4129
Red Sea Rift, E and W, contrasting styles 4146
New Zealand, Hikurangi margin; accretionary prisms, birth 5372
plate boundaries; transform-convergent boundaries 5390

marginal basins (More at BASINS ...)
Japan, Early Miocene Koura Formation; sedimentation, volcaniclastic 3592
Cenozoic; Mexico: Gulf of; hydrocarbons, distributions . 4803
Delaware Bay; sedimentation 5256

marginal ice zone
waves, incoming, role in dynamics 3361
Bering Sea; circulation, effects 3365
Southern Ocean, Scotia-Weddell Confluence; water column, upper, structure and evolution 3911
waves, directional spectra; estimation using linear prediction .. 4450
Euphausia, superba; krill, Antarctic 4919
Weddell Sea; Tintinnida, abundance, distribution in autumn 4930
Okhotsk: Sea of; structure, dynamics 5717
Weddell-Scotia Confluence; predators, top, as indicators of ecosystem events 5974
Weddell Sea; Scotia Sea; plankton, and other biota, ecology; *Polarstern* study 6094
floe pair interaction event 6219
sea level; positioning, GPS, height determinations 6221
Weddell Sea; Scotia Sea; zooplankton, proto-, abundance and feeding ecology 6460

marginal seas
Mesozoic; North America, W; exotic terranes 4735

margins: active
beneath; deep geodynamic processes 4778
detailed structure and processes; symposium 4811

margins: passive
Mexico: Gulf of, Texas Gulf; crust, deep structure; basement, Ouachita-Precambrian 5943
formation 5958

Mariana Arc
forearc; mud volcanoes 4064
Esmeralda Bank; hydrothermalism, S-rich 5313
sediments, trace element and isotopics; magma, petrogenesis, implications for 5398
Kuril Arc; mantle, high-velocity zones; earthquakes, deepest, beneath 5955
fluid seeps; seamounts, emplacement; tectonics, forearc ... 4683

Mariana Islands
N; reef sediments 4662
birds; seabirds; new and unusual records 4902
W of; Anguilla, japonica; spawning, area discovered 5502

Mariana Trough
S; seafloor spreading, locus 5377
basalts, petrology; in Chinese, English abstract 5393

mariculture (More at AQUACULTURE ...)
aquaculture; annual buyer's guide and industry directory (1992) 3806
fish farming, caged, effects; sediments, metabolism and sulfate reduction 5586
fisheries; toxic blooms, effects 5608

marine agronomy (More at AGRONOMY ...)

marine archaeology
South Africa, excavation of the *Oosterland* in Table Bay 5634

marine biosphere
role; global carbon cycle 5223

marine boundary layer
clouds, persistent 6259
particles, nucleation; aerosols 6269

marine chemistry
biogeochemistry, marine, and geochemistry; educational 6530

marine mammals
research; Arctic area; remote sensing, AVHRR imagery .. 4177
Micronesia; annotated checklist 4819
research; polar seas 4874
management organizations; Alaska 6125

marine park<s> (More at PARKS ...)

marine policy (More at POLICY ...)

Marine Pollution Bulletin
pollution, marine; editorial 4993

marine research
history of oceanography; oceans; proceedings 4356

marine resources (More at RESOURCES ...)

marine snow (More at PARTICULATE MATTER ...)
particulates, large, formation 5817
Panama Basin; particle aggregates 6293

marine structures (More at STRUCTURES ...)

marine virology
viruses; educational 3844

maritime boundaries
geodetic surveys; algorithm 5909

maritime industry (More at INDUSTRY ...)

Marmara: Sea of
tectonics, neotectonic structure; crust 4133

Marquesas Fracture Zone
shear stress, geophysical constraints; fracture zones 5414

Mars
Earth; Venus; planetary tectonics, structures 6444

marsh communities
Foraminifera, assemblage zones; sea level, and flora, influence 3791

marsh creeks
New Jersey, S; fauna, composition, abundance, biomass 6478

marsh soils
pore water, chemistry 4071

marshes (More at COASTS ...)
pollen analysis; climate change, rapid, past 7000 yr; California, S coast 3577
tidal freshwater; Delaware Estuary; metals, accumulation, retention mechanism 4086

salt, deteriorating; Louisiana; Spartina, alterniflora; relationship among topography, hydroperiod, and growth 4261
salt; circulation; estuaries 5025
salt, interactions in; Brazil, Paranagua Bay; macrofauna; plant biomass 5517
tidal; water level chamber, fluctuating; for biogeochemical experiments 5787
salt, fringing; England, SW; denitrification, rates; mud flats 5822
tidal freshwater; Holocene, Late, paleoecological development; Delaware River, Estuary, upper 6330
marshes: diked
flooding, prolonged, effects of; invertebrates, nectonic 3750
marshes: salt
humic matter, makeup 5188
fluxes; upwelling, influence; nutrients, water column concentrations 5810
ecology; New England 6139
development; North Carolina, Topsail Sound 6326
marshes: tidal
evapotranspiration 6025
Martinique
Lesser Antilles; volcanism, evolution; petrogenetic implications 6398
Mascarene Ridge
central; geomorphology and recent development 4065
mass extinction (More at EXTINCTION ...)
Triassic-Jurassic boundary; bolide impacts, Manicouagan; dates incompatible 3588
Cretaceous-Tertiary boundary; comet impacts, multiple; report 3841
Permian-Triassic boundary; catastrophism 5010
mass spectrometry (More at SPECTROMETRY ...)
mass transport (More at TRANSPORT ...)
and heat; convection; fluid dynamics 5117
Massachusetts
New Bedford Harbor; sediments; dechlorination, processes; PCBs 5230
mathematical analysis
the grand challenge for partial differential equations; stochastic phenomena; nonlinear phenomena 3813
mathematical bioeconomics
fisheries economics 3834
mathematical modelling
geophysical phenomena; stability analysis 5589
mats: microbial
sulfates, reduction, and thiosulfate consumption 5536
Mauna Loa
observatory; atmospheric methane, variations 5163
Observatory; atmospheric sulfur dioxide 5165
at; aerosol optics; long-range transport 5776
Mauritius
EEZ; Indian Ocean; phytoplankton, assemblages; pigments 5980
Maxilliphimedia
longipes, redescribed; Antarctic Peninsula; Amphipoda, iphimediidae 3776
McMurdo Sound
epontic algae; evidence for nutrient stress during the spring bloom 4937
zooplankton 5982
meanders (More at CURRENTS ...)
Kuroshio, variation 1986-88; currents 5663
meanders: current
geostrophic flow; fluid dynamics; eddies, flux 3389
measurement standards
hydrographic tables; International Oceanographic Tables; Practical Salinity Scale; International Equation of State of Seawater; history 4358
mechanical energy (More at ENERGY ...)
Mediterranean area
past 120 years; temperature, air and sea, fluctuations 3411
Neotethys, paleogeographic and paleotectonic evolution 3602
-warm Atlantic group; macroalgae, temperature responses and distribution 4308
mantle, upper, velocity structure 4773
Mediterranean Inflow
observations; Black Sea; currents 3294
Mediterranean Sea (See also narrower geographic, physiographic and zonal designations ...)
E; circulation, horizontal 3283
NW; currents, Liguro-Provencal-Catalan; Balearic Sea; observations 3292
W; wind field 3443
Egyptian Shelf; sediments, distribution in; organic matter, N, P, C 3499
Thau Lagoon; trace metals; in French, English abstract 3521
Levantine Basin; Red Sea; Suez: Gulf of; microplankton 3714
E; Red Sea; Thaliacea; in French, English abstract 3767
benthic storms 3878
W, over; eolian dust; aerosols, optical thickness 3987
elements, chemical species, reactivity; aquatic environments; symposium 3998
Ionian Basin stagnation; Holocene, Early; Foraminifera, benthic, planktonic 4117
NW; Fucales; Cystoseira, caespitosa, community structure and dynamics 4306
biota, accumulations in tissues; metals, heavy 4317
water; eddies, intrathermocline; lenses, formation and evolution 4426
Pacific; tsunamis, compared 4459
storms, Gorbush, Dec '89; simulation 4606
Sardinia; Miocene; graben sediments 4695
Indian Ocean; Atlantic; microplankton; ATP, variations in 4828
and Atlantic species; abyssal fauna 4883
Balearic Islands; Polychaeta, communities, relationship to plant covering; littoral zone, medio- and infra- 4895
shallow; benthic fauna; evidence of disturbance 4897
E; circulation; new phenomenology 4971
pollution, environmental protection; international law; Barcelona Convention 4987
from; saline lenses 5107
E; nutrients, dynamics, new production; eddies, warm-core . 5204
E; Bannock Basin; organic matter, C accumulation; sapropels, role of productivity in formation 5274
Quaternary, Late; sapropels, stratigraphy 5343
Catalan margin; Holocene; Foraminifera, assemblages; sedimentation, processes; in French, English abstract ... 5344
bacterial communities; seagrass beds, above 5535
Protozoa, ciliated; interstitial communities 5554
E, Euboikos Gulf; water masses; flow, features 5678
tsunamis 5706
NW; atmospheric phosphorus 5775
NW; Rhone River, Delta; hydrocarbons, PAHs, biogenic; sediments 5859
off Israel; Tertiary, Late; margin sediments 5865
Pliocene, to early Pleistocene; surface temperature; productivity 5889
Alboran Basin; Pleistocene, end, since; primary production, variations 5896
W; Valencia Trough; crust, evolution, vertical movements . 5916
NW; phytoplankton, variability; fronts, Catalan, across ... 5979
W; Posidonia; Foraminifera; seagrass beds; in French, English abstract 6054
checklist; Fucophyceae; seaweeds 6062
N basin; circulation; atmosphere, -climate conditions, relation to 6159
Valencia Trough, geology and geophysics; rift tectonics ... 6318
Miocene, Late, Messinian events; sediments, carbonate-evaporite relations 6363
W; Mallorca, and Menorca; lithospheric heat flow 6375
W; Tertiary; Valencia Trough; crust, structure; sedimentation, history 6383
W; Valencia Trough; sedimentary basins, origin 6389
E; abyssal basins; crust, seismic soundings 6416
NW; plankton; prochlorophytes, cell cycle distribution ... 6465
NW; Cephalopoda, 2 bathybenthic spp. 6467
meiobenthos (More at BENTHOS ...)
communities; North Sea; Copepoda, density, biomass, distribution 5510
bathyal; respiration, rates 6479
meiofauna (More at FAUNA ...)
consumption by; Texas, San Antonio Bay; bacteria, sediment; microphytobenthos 3746
melanin
colloidal; Tunicata, filtration by; seawater 4200
meltwater
Baffin Bay, SE shelf; deglaciation, 13.5-7 kya 3571
tidal currents; fjord circulation 5022
mercury
global concentration increase; Atlantic, over; atmosphere .. 3459

in the marine environment; ecotoxicology, and biogeochemistry; in French, English abstract ... 3821
Liverpool Bay; sediments; arsenic ... 4043
Rhone Delta, and adjacent areas ... 4044
content; Tyrrhenian Sea, N; biota, edible species ... 4942
reactive; North Atlantic, W; Scotian Shelf ... 5177
changes in concentrations; North Atlantic; seabirds, feathers as indicators ... 5580
sources, composition; Pacific; precipitation ... 5784
France, distributions in Bay of Marennes-Oleron; cadmium . 6307
mercury pollution
Japan; Minamata Bay; what we have learned since ... 3822
meroplankton (More at PLANKTON ...)
Mersey Estuary
carbohydrates, particulate, tidal variations ... 4028
organochlorines, volatile, sources and fate; pollution ... 4651
Mesodinium
rubrum; Brazil, off; Ciliata; plankton, subsurface layers ... 4221
rubrum; Ciliata, avoidance by; estuarine flushing ... 5553
Mesozoic
Europe; Arctic area; seaways, structural foundation and evolution ... 3578
Paleozoic, Late; Asia, SE; paleogeography ... 3597
North America, W; exotic terranes; marginal seas ... 4735
Australia, NW; Himalayas, northern; margin, evolution .. 4736
Cenozoic; margin, evolution ... 4738
North Pacific, W; magnetic field, isochron chart ... 5914
Canary Basin; North Atlantic, central, evolution; magnetic field, anomalies ... 6373
Gondwana, within; tectonics, rotations ... 6392
evolution; Spain, Betic rifted margin; lithosphere, dynamics; tectonics ... 6430
Messinian
surface; Valencia Trough; paleogeography, implications . 6418
metabolism: community
Red Sea; Aden: Gulf of; zooplankton ... 3724
metabolism: microalgal
water quality, and ecotoxicology monitoring ... 4947
metabolites: bacterial
enzymes, 5'nucleotidase activity ... 4264
phosphorus, regeneration, role in ... 4265
metabolites: bioactive
India, coast; algae, antiviral extracts ... 6038
Metacirolana
n.sp., redescription; Caribbean Sea, off Colombia; Isopoda, cirolanid ... 4292
metal<s> (More at ELEMENTS ...)
metal complexes: organic
Cu, Ni; sediment slurries, dissolved phase ... 4002
metal ions
interactions during uptake; macroalgae, by ... 4933
metalliferous sediments
Atlantic; atacamite ... 4092
neodymium, scavenging residence time; hydrothermal vents, near ... 5872
metallothionein
-like proteins; Bivalvia; Mytilus, galloprovincialis ... 4274
Canada, Atlantic; metals, heavy; seabirds, concentrations .. 4316
metals
complexes, separation; chemical analysis; ion chromatography with UV and potentiometric detection ... 3467
Cd, Zn, Ni, Cu; Indian Ocean ... 3479
Halifax Harbor, a chronology of contamination; hydrocarbons; sediments ... 3517
elemental; minerals, Mn-bearing; manganese nodules; relationships ... 3677
Cd, Ni; sediments; toxicities, acute, acid volatile sulfide as predictor ... 3801
organic- and crystal-bound; Bivalvia, shells; estimation methods ... 3804
mixtures; Bivalvia, toxic response ... 3805
Cd, Cu, Fe; Scotia Sea; Weddell Sea; Antarctica, Weddell-Scotia Confluence ... 3995
ions, kinetic interactions; humic matter, humic acids ... 3999
accumulation, retention mechanism; Delaware Estuary; marshes, tidal freshwater ... 4086
heavy; Canada, Atlantic; metallothionein; seabirds, concentrations ... 4316
heavy; Mediterranean Sea; biota, accumulations in tissues . 4317
heavy, seasonal variations; Australia, Darwin Harbor; Bivalvia, oysters ... 4321
fluxes in pelagic oceans; Pacific; particulates, settling ... 4635
Cu, Pb, Zn; Australia, Fly River Delta, Torres Strait; sediments ... 4647
biology in relation to feeding; Amphipoda, stegocephalid, 3 spp. ... 4925
Cu, Cd, Pb; Atlantic, baseline; neuston ... 4958
Cu, Zn; Brachyura; Cancer, pagurus, respiratory impairment during hypoxia ... 4960
fluxes; Juan de Fuca Ridge; Guaymas Basin; manganese, biochemistry; hydrothermalism, areas of ... 5314
Fe, Mn, Cu, Zn enrichments; North Pacific, subarctic, effects; productivity, and biomass ... 5465
Cu, Zn, Fe, Mn; India, Bombay coast; Bivalvia, bioaccumulation in ... 5574
France, Atlantic coast; organochlorines; pollution, flounder muscle as indicator ... 6071
heavy, decrease; Baltic Sea, bay; sediments; sewage, treatment ... 6109
heavy; Dar es Salaam; Tanzania; coastal sediments ... 6308
heavy; nutrients; plankton, in enclosures, effects on ... 6509
metals: heavy
Cuba, 5 bays; sediments ... 3518
sediments, bioavailability, accumulation, effects in; estuaries, U.K.; review ... 4943
Alexandria Harbor, Egypt ... 5235
budget; Arcachon Basin; Zostera, noltii; eelgrass, importance; in French, English abstract ... 6063
metals: trace
water samplers, estuarine ... 3466
natural waters, determination in ... 3470
seawater, coastal and shelf; review of measurements, ICES and JMP labs ... 3477
New Jersey, estuaries and offshore waters; organic matter, DOC ... 3516
Mediterranean Sea, Thau Lagoon; in French, English abstract 3521
mobility; sediments, cohesive; geochemical characterization .. 3825
partitioning; aerosols, polluted, released from; coastal zone, seawater ... 4047
suspended matter; particulates; ICES intercomparison exercise ... 5210
Cochin Estuary; India ... 5231
productivity, in oceanic waters ... 5458
productivity, limits on; seawater, low concentrations in 5485
metamorphic belts
Japan, islands ... 5938
metamorphosis
Harpacticoida ... 4918
Metapenaeus
monoceros; Penaeidae; insecticides; toxicities ... 4957
meteorites
breakup, delivery to Earth; Antarctica, chondrites ... 4812
chondrite; chondrules, compositional classification scheme .. 6146
meteorology
data assimilation; signal processing; oceanography ... 3812
meters (More at OCEANOGRAPHIC APPARATUS ...)
Meterythrops
microphthalma; Japan: Sea of; Mysidacea ... 4285
methane
geochemistry; Black Sea ... 3514
anomalies; submarine volcanoes, activity; helium, -3 anomalies ... 4139
subsurface maximum; Southern California Bight; water column ... 5801
Vancouver Island; gas hydrates; sediments, seismic reflectors ... 5858
as cause; Eocene, Early; polar warming, possible ... 5893
methane: atmospheric
climate, effects on ... 3421
variations; Mauna Loa, observatory ... 5163
methanesulfonate
Pacific, tropical marine boundary layer; particulates, size distributions ... 5779
to sulfate molar ratio; South Pacific; aerosols, submicrometer particles ... 6267
Metridia
longa; Fram Strait; Copepoda, life history; Calanus, 3 spp.; in German, English abstract ... 6495
gerlachei, ecology; Bransfield Strait; Copepoda ... 6497
Mexico
Cancun; oxygen, dissolved, diel dynamics; eutrophication; lagoons, tropical ... 4011
Lagoon La Cruz, Sonora; nutrients; seston; in Spanish and English ... 5804

Isthmus of Tehuantepec; subduction, geometry; Cocos Plate, downgoing, stress state ... 5915
Campeche Bank; hydrocarbons, aliphatic; sediments; biota 6074
Mexico: Gulf of (See also narrower geographic, physiographic and zonal designations ...)
Campeche: Bay of; eddies, cyclonic; in Spanish and English 3295
Florida Escarpment, development; carbonate terranes, unconformities ... 3556
sediments; compressional waves, speed ... 3557
physics; circulation; currents; workshop ... 3856
circulation; remote sensing ... 3867
Loop Current; eddies, evolution, kinematics ... 3874
eddies, lower continental slope ... 3875
W; Loop Current; rings, collision with slope; currents ... 3883
air-sea interactions; storms, related to ... 3957
productivity, and nutrients; plankton; rings, warm-core ... 4195
Inland Sea, of Japan; zooplankton, and their environment; diel variation ... 4199
salt structures; sediments, seismic imaging ... 4653
sonar, backscatter variation; fan sediments ... 4674
Mississippi Fan; fan sediments, fold belts ... 4679
NW slope; hydrocarbon seeps ... 4797
Arabian Gulf; carbonate sediments, facies; hydrocarbons, fields ... 4799
N; petroleum, origins ... 4800
Cenozoic; hydrocarbons, distributions; marginal basins . 4803
Sergestidae, shrimp assemblages; composition, distribution, feeding ... 5546
deep; brines, submarine venting ... 5870
Texas Gulf; passive margins; crust, deep structure; basement, Ouachita-Precambrian ... 5943
Halobates, populations ... 6039
copper; zinc; episodic event effects on concentration, speciation ... 6522
microalgae (More at ALGAE ...)
response; photosynthesis; irradiance, variations ... 4934
epibenthic, effects on; California, salt marsh; Bivalvia, infaunal ... 6477
microalgae: symbiotic
zooxanthellae; corals, and sea anemones, release after cold shock ... 3747
microalgal metabolism
water quality, and ecotoxicology monitoring ... 4947
microbes (More at MICROBIOTA ...)
microbial biomass
Black Sea ... 3753
Hiroshima Bay; community structure ... 6035
microbial communities
sediments; biomass, structure variations ... 5529
microbial ecology
hydrothermal sediments ... 6484
microbial mats
sulfates, reduction, and thiosulfate consumption ... 5536
microbiota (See also BACTERIA, microbes, microorganisms, viruses; more at BIOTA ...)
production; Black Sea; particle flux ... 3758
light scattering ... 3764
bacteria; abyssal zone; Japanese research project; report ... 3842
Weddell Sea, -Scotia Sea, during ice retreat; carbon, cycling; phytoplankton ... 4210
technetium, effects ... 4318
nitrogen, transformations; reef sediments ... 5520
California, S; films, surface; amino acids, dynamics ... 5521
concentration of; filtration, vortex flow ... 5525
PCBs; biodegradation ... 5532
ETS activity; Antarctica, King George Island; temperature, influence ... 5537
limiting activity; sediment traps, treatments; zooplankton, collection, effects on ... 6030
sediments, pelagic; organic matter, degradation ... 6031
pollutants, enantiomer separation; herbicides, degradation . 6079
control by, symposium; pollution ... 6112
planktonic; Ligurian Sea, frontal areas; flagellates, nano-, pico-; contributions to ETS activity ... 6488
microbiota: swimming
hydrodynamic phenomena in suspensions ... 4367
microecosystems (More at ECOSYSTEMS ...)
microfauna (More at FAUNA ...)
microflora: sediment
Vietnam, coast; reef periphyton ... 4939
microfossil taphonomy
sediments, fabric; ooze, pelagic, relationships ... 5901
microfossils (More at FOSSILS ...)
Micronesia
marine mammals; annotated checklist ... 4819
micronodules (More at NODULES ...)
microorganism<s> (More at MICROBIOTA ...)
microphytobenthos
Texas, San Antonio Bay; meiofauna, consumption by; bacteria, sediment ... 3746
primary production; C-14 incubation technique ... 4179
sand, productivity; Mississippi Sound; seagrass beds ... 6064
microphytoplankton (More at PLANKTON ...)
microplankton (More at PLANKTON ...)
Red Sea; Suez: Gulf of; Mediterranean Sea, Levantine Basin ... 3714
Barents Sea; Tintinnida ... 4197
Mediterranean Sea; Indian Ocean; Atlantic; ATP, variations in ... 4828
microscopy (See also photomicrography, SEM, TEM ...)
epifluorescence, SEM; nannoplankton; picoplankton ... 5482
microtektites (More at tektites ...)
microvibrions (More at BACTERIA ...)
microwave spectrometers (More at SPECTROMETERS ...)
microzooplankton (More at PLANKTON ...)
Mid-Atlantic Ridge (See also AMAR area, FAMOUS area)
rift valley wall; rockslides, massive, submarine ... 4087
Oceanographer Transform; hydrothermal fluids; brines, Ca-rich; inclusions, plutonic rock ... 4104
23-26°N; magnetic field, detailed survey ... 4118
rocks, popping; composition of gas trapped in vesicles ... 4136
earthquakes, micro-; seismicity, characteristics ... 4769
North Pond; sediments, heat and fluid flux through ... 5308
beneath; mantle, heterogeneity ... 5412
axial valley; crust, peridotite and gabbros ... 5940
tectonics, and morphology ... 5950
above and eastward of; circulation; currents, North Atlantic Current ... 6186
Middle America Trench
earthquakes, statistics, synthetic seismicity ... 5961
Middle Atlantic Bight
shelf margin; phytoplankton, standing crop ... 4238
plankton blooms, spring ... 5472
mid-ocean ridges (More at RIDGES ...)
magma chambers ... 3647
hotspots; interactions ... 3669
sulfide deposits, Au-bearing; mineralogy, geochemistry ... 3671
gravity, symmetrical anomalies; spreading centers, velocity variations ... 4120
spreading centers, spreading rate dependence; gravity field, structure ... 4123
Norway-Greenland Basin; fault zones, transform, Malloy 4141
plate tectonics; overviews ... 4379
basalts, submarine glasses; seamounts, Loihi; noble gases . 4749
seismic structure/spreading rate relationship ... 5920
East Pacific Rise, evolution ... 5941
structure ... 5959
magma chambers ... 6134
Mid-Pacific Mountains
ferromanganese nodules ... 4805
midwater trawls (More at TRAWLS ...)
migration
potential; Suez Canal, through; plankton, Indo-Pacific ... 3688
vertical, predator-induced; Copepoda ... 4821
northbount; Antarctic Peninsula; Sterna, paradisaea; seabirds ... 6482
migrations: Lessepsian
Suez Canal; biogeography; in French, with English abstracts, 6 papers; 7 p ... 3687
Milankovitch cycles
rhythms; Cretaceous; paleoclimate ... 3598
Neogene, Late; oxygen, marine isotopic record; linear and nonlinear couplings ... 4693
Minamata Bay
Japan; mercury pollution; what we have learned since ... 3822
mineral deposits
Fiji, geological evolution ... 5301
mineral resources (See also metallogenesis, ores; more at MINING, RESOURCES ...)
mineralization
kinetics; organic matter; sediments, anoxic, in ... 4640
carbonate precipitation; basalts, in; fluids, flow ... 4681
secondary; rare earths; basalts, North Atlantic; karsts, reef carbonate, Tunisia ... 4687

re-, organic; Madeira Abyssal Plain; macroplankton, deep-sea, contributions; zooplankton 4850
mineralization: hydrothermal
Lau Basin; North Fiji Basin 5315
mineralogy
computer software; geochemistry; volcanology; petrology; applications 4060
minerals
Mn-bearing; manganese nodules; metals, elemental; relationships 3677
inclusions, fluid; identification of the phases 4654
computer-aided identification 4655
formation; hydrothermal vents 4684
anhydrous, role; mantle; water 4755
minerals: clay
kaolinite 4026
California: Gulf of, Guaymas Basin; sediments 4095
Bengal: Bay of; sediments 4669
Paleocene, and Eocene; South Atlantic; Southern Ocean; kaolinite, distributions, implications 5339
India, Visakhapatnam shelf; sediments 5856
minerals: mantle
water, content 6526
mining (See also dredging, minerals; more at INDUSTRY ...)
mining: seabed
U.K.; Crown Estate; implications for the future 3835
Miocene
Mediterranean Sea, Sardinia; graben sediments 4695
Mid-, deep-sea; sediments, isotopic stratigraphy 4702
Suez: Gulf of, geology; sediments, biofacies development .. 5326
North Atlantic, DSDP Site 608; fossil record, nannofossil chronology 5351
-Pliocene; Taiwan, E, evidence from; Luzon Arc, collapse; collision tectonics 5375
Late, Messinian events; Mediterranean Sea; sediments, carbonate-evaporite relations 6363
Miocene-Pliocene boundary
extension to; geomagnetic field; geological record, Geomagnetic Polarity Time Scale 3587
Mississippi
and Alabama OCS; Pleistocene, Late, transgression; shelf morphology 4657
Mississippi Canyon
delta sediments 4676
Mississippi Fan
Mexico: Gulf of; fan sediments, fold belts 4679
fan sediments; structural geology, evolution 5868
Mississippi Sound
seagrass beds; microphytobenthos, sand, productivity 6064
mixed layer (More at LAYERS ...)
stratified thermocline; model 3278
role; vorticity, potential; thermocline, main 3289
upper ocean, response to atmospheric variability; ocean-atmosphere interactions 3433
flow, subduction rates and diabatic forcing; relationship 4320
upper oceanic; turbulent energy, dissipation; air-sea interactions 4577
temperature, fluctuations; small-scale activity 5108
dynamics; zooplankton, distributions; simultaneous measurements 5474
thermocline; tropics; halocline, barrier layer between 5646
response; India, off Bombay; momentum flux, and buoyancy 5725
ocean; ocean-atmosphere interactions; modelled decadal fluctuations 5741
mixing (More at FLUID DYNAMICS ...)
vertical; Pacific, equatorial, hydrographic patterns 3268
internal waves, gravity 3320
traced by Chernobyl fallout; Black Sea; redox interface ... 3386
implications; Pioneer Seamount, near; Point Arena, off; shear finestructure, depth dependence 3922
Antarctica, shelf waters; gas exchange 4395
processes; circulation, vertical, and internal tides; energy flux 4398
convection, scale selection in shallow seas 4526
Indonesia; thermocline 4529
rings, warm-core, 82B, decay; circulation, meridional 4530
shear; stratified fluids 4532
Tsushima Warm Current; water masses; fuzzy set study . 5684
Magellan: Strait of, hydrology; water masses 6154
characteristics; East China Sea; water masses 6188
and internal hydraulics; Hudson Bay, Manitounuk Sound; solitons; stratified estuaries 6227
mixing: convective
density interfaces, across; in Spanish, English abstract 3408
mixing: mantle 5953
modelling: circulation
coupled GCMs; ocean-atmosphere interactions; in French, English abstract 3430
Fleet Numerical Oceanography Center 5651
Naval Oceanographic Office basin model 5655
and prediction; U.S. Navy program 5734
Navy prediction program 6096
modelling: climate
global warming; limits 5009
ice ages, astronomical theory 6244
modelling: computer
science, implications, applications 5595
modelling: ecological
North Sea 4820
modelling: mathematical
geophysical phenomena; stability analysis 5589
modelling: numerical
U.S., Fleet Numerical Oceanography Center operations and products; forecasting 6514
modelling: oceanographic
and products; U.S., Fleet Numerical Oceanography Center ... 6513
modons
Larichev-Reznik; fluid dynamics 3928
Moho
imaged; U.S., E coast; continent-ocean transitions 4766
moisture flux
inclusion in parameterization; cumulus clouds 4603
molecules: organic
origin of life; endogenous production, exogenous delivery, and impact-shock synthesis; review 3847
environmental persistence prediction 5831
Mollusca
skeletal distributions; U. S. Virgin Islands, St. Croix; hurricanes, Hugo 3535
shells; dating; aspartic acid racemization 5832
shells; Pleistocene; California: Gulf of, N; neotectonics; taphonomy 5898
Weddell Sea, shelf and slope; Bivalvia, fauna, distribution .. 6012
shells; amino acids, composition; fossil record 6368
moment release
depth distribution; earthquakes, underthrusting; subduction zones 3670
momentum
wave-energy and pseudoenergy, conservation; fluid dynamics; geostrophic instability, quasi- 5120
momentum flux
and buoyancy; India, off Bombay; mixed layer, response ... 5725
California: Gulf of; air-sea interface; heat flux; in Spanish and English 5744
Southern Ocean; eddies, contributions 6169
momentum transport (More at TRANSPORT ...)
Monachus
monachus; Pinnipedia, Mediterranean monk seal; biomonitoring; management, strategies 6517
Monhystera
disjuncta; Nematoda; pollutants, effects 4324
monitoring: environmental
Norwegian Sea; nuclear submarines, sunken 4973
Europe; programs prematurely terminated 5000
Hudson Bay; Raritan Bay 5590
monitoring: pollution
water; solid phase extraction and spectroscopy 3522
Nova Scotia, Sable Island; litter, persistent 5609
programs; statistical power 5611
monosaccharides
organic matter; photosynthesis, production during; phytoplankton 4843
monsoon<s> (More at WIND(S) ...)
monsoon circulation
Quaternary, Late; Indian Ocean; wind, forcing of; model results 3576
Indian 4589
summer; model 5154
Monsoon Experiment (Use MONEX)
monsoon rainfall
surface temperature 5147
India; surface temperature, Arabian Sea; ocean-atmosphere interactions; associations 6250
MONSOONEX (Use MONEX)
monsoons
Indian; snow, cover, Eurasian; El Niño, ENSO; relationships, synthesis 3956

during retreat; Bengal: Bay of, NW; circulation, and hydrography 6170
South Asia; surface temperature, North Atlantic; ocean-atmosphere interactions; relationship 6251
Arabian Sea; water column, effects on; particulates 6529
Montastraea
annularis; corals, sibling species, bleaching; climate, record .. 3768
Moon
lunar science; 20 years after Apollo; commemorative section . 3848
origin, early history; Daly: R.A.; overlooked paper 5632
Moreton Bay
Australia, W; sand banks, subtidal, evolution; bedforms .. 5258
morphology: shelf
Pleistocene, Late, transgression; Mississippi, and Alabama OCS 4657
motility
and energetics, influence on; bacteria, cell size 3760
Mount Etna
tectonics, evolution; volcanoes, gravitational spreading 5924
Mount Pinatubo
Philippines, 1991; stratosphere, effects; climate, effects; volcanic eruptions 4750
1991; volcanic eruptions; basalt trigger? 4753
mountain belts
supercontinents, cycle; plate tectonics 5389
Mozambique
off; Decapoda; Homolodromiidae, Homolodromia bouvieri rediscovered, redescribed 4924
Mozambique Channel
flow; currents 6180
mud (More at SEDIMENTS...)
mud dispersal
Amazon Plume 5273
mud flats
ring structures; Saint Lawrence Estuary; ice, shore, as cause 5272
England, SW; denitrification, rates; marshes, salt, fringing 5822
mud flocs
settling; turbulence, role 4088
mud volcanoes
Mariana Arc, forearc 4064
mudbanks (More at BANKS ...)
muds
laboratory testing; sediments 3530
rheological boundaries; sediments 3547
need for better characterization; sediments 3563
characterization; sediments; special issue 3564
erosion, resistance, prediction; sediments 5855
muds: fluid
generation, transportability and dewatering 3540
multichannel assembly for radio-plankton sinking (Use MARS)
Munida
n.sp., n.description; Indian Ocean, W; Anomura 6498
Muricidae
prosobranch; Gunnar Thorson's global collection of egg capsules 4275
mussels (More at SHELLFISH ...)
in; Adriatic Sea; okadaic acid 6072
mycoflora
Bengal: Bay of, Madras coast; sediments; water column; fungi 6034
Mysidacea
Tasmania, SE; Tenagomysis, 3 n.spp. 3778
Japan: Sea of; Meterythrops, microphthalma 4285
Australia, SW; Rhopalophthalmus, constrictus n.sp.; Australomysis, reubeni n.sp. 5550
submarine caves, fauna 6499
Mytilus
galloprovincialis; Bivalvia; metallothionein, -like proteins .. 4274
edulis; Tokyo Bay; Bivalvia; tin, organotin compounds ... 4949
edulis; Bivalvia; hydrocarbons, bioconcentration factors ... 4953
consequences of keeping; Bivalvia; culture, laboratory 5585
edulis; Netherlands, 2 estuaries; Platichthys, flesus; pollutants, trends 6082
sp., contributions; Rhone River, estuary and delta; Bivalvia; sediment-water interface, fluxes across; radionuclides 6506

Namibia (See also South-West Africa)
off, 1986; water masses; circulation 4396
S, off; river channels, paleo-; coast, parallel to 5837
off; Benguela Upwelling; zooplankton, composition, distribution 6464
off, autumn 1985; Benguela Upwelling; phytoplankton .. 6466
Nankai Trough
seismic profiles, spread and split-spread; crust 4791
Nannastacidae
Cumacea; rediagnosis and revision 3789
nannofossils (More at FOSSILS ...)
nannofossils: calcareous
Jurassic, Upper; North Atlantic, Blake Bahama Basin 3617
Cretaceous-Tertiary boundary; Dinoflagellata; sea level, changes, response to 4115
Cretaceous-Tertiary boundary, stratigraphy across; Israel; Dinoflagellata 5322
Cretaceous, Early 5899
nannoplankton (More at PLANKTON ...)
picoplankton; microscopy, epifluorescence, SEM 5482
Nansen: Fridtjof
Arctic area, explorations; history of science 4359
naphthalene
oxidation, NIH shift; cyanobacteria, Oscillatoria sp. strain JCM 4907
nappes
California, Franciscan Complex; tectonics; subduction, and metamorphic evolution 5346
Nares Strait
polynyas; sea ice 3346
Narragansett Bay
coprostanol, geochemistry; sediments; seawater 6115
mapping; benthic pollutants, enrichment 6121
National Center for Atmospheric Research (Use NCAR)
National Geophysical and Solar-Terrestrial Data Center of NOAA (Use NGSDC)
National Institutes of Health
U.S.; National Science Foundation; under harsh scrutiny; report 4350
National Meteorological Center
weather forecasting; new global operational analysis system . 3460
National Science Foundation
U.S.; National Institutes of Health; under harsh scrutiny; report 4350
natural gas (More at GAS, HYDROCARBONS, PETROLEUM ...)
natural selection (More at SELECTION ...)
wave forces, on organisms; biota, evolution, body form 4327
natural waters (More at WATER ...)
determination in; trace metals 3470
trace elements; cathodic stripping voltammetry 3474
phosphorus, dissolved, measurement 5789
organic matter, LMW compounds; trace analysis, NMR spectroscopy 6286
Nautilus
pompilius, behavior and physiology; oxygen, low content 6009
naval architecture (More at VESSELS ...)
Navier-Stokes equations
regularized; fluid dynamics; analysis 3406
regularized; fluid dynamics; analysis 3407
finite element methods; fluid dynamics 3929
parabolized/reduced techniques reviewed; flow, viscous; fluid dynamics 3935
proof of existence of weak and statistical solutions; fluid dynamics 4540
error estimates of projection methods 6090
navigation
positioning; charts, navigational 6106
and hydrography; positioning, GPS 6107
Nectopyramidinae
revised; Siphonophora, prayid 4915
nekton samplers (More at SAMPLERS ...)
Nematoda
Monhystera, disjuncta; pollutants, effects 4324
neodymium
isotopes, as tracers; Indian Ocean; sediments, supply; circulation, paths 5282
scavenging residence time; metalliferous sediments; hydrothermal vents, near 5872
Neogastropoda
New Zealand; imposex 5579
Neogene
Philippines, central; collision tectonics; in French, English abstract 3627

Late; Milankovitch cycles; oxygen, marine isotopic record; linear and nonlinear couplings ... 4693
Late, and Pleistocene; sediments; magnetism, rock ... 5359
Valencia Trough; Iberian Peninsula; Catalan Cordillera, coastal; crust, vertical movements, constraints on extension ... 6426
Iberian Peninsula, E margin; Valencia Trough; crust, structure, evolution ... 6433

neon
Black Sea; helium; tritium ... 3482

neotectonics
Pleistocene; California: Gulf of, N; Mollusca, shells; taphonomy ... 5898

Neotethys
paleogeography; Aptian, and Albian ... 3583
paleogeographic and paleotectonic evolution; Mediterranean area ... 3602

Nepelle
nelera, n.gen., n.sp.; Australia; Amphipoda, urohaustoriid .. 3770

nepheloid layer (More at LAYERS, PARTICULATE MATTER ...)

nepheloid layers
structure, biological activity; Maine: Gulf of ... 4869

Netherlands
Ems Estuary; flow, tidal and residual ... 3872
tidal inlet; Calanoida; Temora, longicornis, grazing pressure; Phaeocystis, bloom, on ... 4204
Holocene; coastal zone, evolution; shoreline dynamics .. 5251
2 estuaries; Mytilus, edulis; Platichthys, flesus; pollutants, trends ... 6082

nets (More at SAMPLERS ...)

nets: plankton
sea ice, sampling in ... 4863

networks: instrument
climate data, influences on ... 3425

networks: neural
pattern recognition, biological ... 5448

neuston (More at PLANKTON ...)
Atlantic, baseline; metals, Cu, Cd, Pb ... 4958

New Bedford Harbor
Massachusetts; sediments; dechlorination, processes; PCBs ... 5230

New Brunswick
coastal areas; phytoplankton; water quality ... 5986

New Caledonia
off; bathyal environments; in French, English abstract 5513

New Caledonia Basin
New Zealand, North Island; hydrocarbons ... 4173

New England
S, shelf and slope; suspended matter, patterns and controls .. 5816
salt marshes, ecology ... 6139

New Guinea
Huon Peninsula; dating, ESR and U-series; corals ... 4054

New Guinea Trench
Manokwari Trough; sediments; crust ... 4733

New Jersey
estuaries and offshore waters; trace metals; organic matter, DOC ... 3516
site-specific controls on processes; estuarine beaches; wind; waves ... 4073
S; marsh creeks; fauna, composition, abundance, biomass .. 6478

New South Wales
Jervis Bay; sedimentary basins, changes ... 5840

New Zealand
Otago Peninsula; phosphorus, reactive ... 4018
Rotoiti Breccia (Taupo volcanic zone); electron spin resonance dating ... 4052
Western Platform; margin sediments, loading by; crust, strength implications ... 4097
South Pacific, W, evolution; ophiolites, Northland; tectonics, implications ... 4160
North Island; New Caledonia Basin; hydrocarbons ... 4173
Wellington; benthic macrofauna; sewage, and natural seasonal disturbances, effects ... 4940
Tasmania; carbonates, temperate shelf, O and C isotopic fields ... 5196
Hikurangi margin; subduction zones, strain partitioning; tectonics ... 5371
Hikurangi margin; margin tectonics; accretionary prisms, birth ... 5372
Taupo volcanic zone; tectonics, and structure; backarc basins ... 5408
Cnidaria; Hydroida; Stylasteridae, 62 spp. ... 5538
Neogastropoda; imposex ... 5579
Amphipoda, 2 infaunal spp.; toxicities, acute; cadmium .. 6075
South Island, Australian-Pacific plate boundary; Quaternary, Late; plate boundaries, slip across; fault zones ... 6382

Newfoundland
E, off; Labrador, off; ice, edge, melt rates ... 3353
Grand Banks; ice scours, and pits ... 4658
shelf; temperature; salinity ... 5020
St. George's Bay; sedimentation, paraglacial; barrier bars, and platforms ... 5844
Grand Banks, W; sedimentation, transgressive; waves; currents ... 5846
Bonavista Bay; Quaternary, Late; sedimentation; glaciation ... 6354

Niagara River
river plumes ... 3889

niche<s> (More at ECOLOGY, HABITATS ...)

nickel
dissolved, speciation; Korea, Chinhae Bay ... 6282

Nigeria
Tarkwa Bay; Foraminifera, benthic ... 4299

Nile Delta
off; nitrogen; phosphorus ... 3498

Ninetyeast Ridge
India; Asia; paleomagnetism, constraints from; plate motions ... 5388

nitrates
utilization; Pacific, equatorial; plankton ... 3703
supply; phytoplankton, uptake kinetics; rings, warm-core, 82B ... 4856
low uptake rates; nutrients, high; chlorophyll, low; oceanic ecosystems ... 5200
formation; particles, sea salt and mineral, on ... 5777

nitric oxide
Pacific, over; troposphere; ozone ... 6264

nitrification (More at NITROGEN CYCLE ...)

nitrogen
Nile Delta, off; phosphorus ... 3498
PON; Pacific, equatorial; carbon, POC; particulates, in ... 3502
Black Sea; Cariaco Trench, off Venezuela; carbon; sulfur; stable isotope studies ... 3509
determinations; phytoplankton, release by ... 3694
N-15, rapid storm-induced changes; Chesapeake Bay; estuarine ecosystems; plankton ... 3720
productivity; Pacific, equatorial ... 3733
sediments, estuarine, bioturbated; oxygen; transformations . 3752
DIN fluxes, controlling; productivity, benthic, importance; sediment-water interface, in hypertrophic systems 4209
assimilation, variations; Southern Ocean, South Georgia and Bransfield Strait; phytoplankton ... 4222
differences; Sargasso Sea; particulates; rings, warm-core, Gulf Stream ... 4628
carbon; phytoplankton, growth and degradation ... 4830
particulate; Gulf Stream; zooplankton; rings, warm-core, 86A; N-15 abundance ... 4857
tissue; macroalgae, 5 spp.; phosphorus, tissue; seasonal fluctuations ... 4932
organic, functionality; Peruvian Upwelling, region; sediments ... 5224
uptake, diel periodicity; phytoplankton, by, in nitrate-rich environments ... 5466
transformations; microbiota; reef sediments ... 5520
dynamics; Zostera, marina; eelgrass beds; high growth, low nutrient period ... 5565
exchange; phosphorus, exchange; air-sea interface ... 5742
San Francisco Bay, sources of; phosphorus ... 5805
Potomac River, Basin; phosphorus; watersheds, balance . 5806
atmospheric deposition ... 5808
uptake; Weddell Sea, -Scotia Sea, during winter; particulates, biogenic; nutrients; productivity ... 5978
phosphorus; watersheds, differential transport through; sewage, -derived N and P ... 6123

nitrogen cycle (See also acetylene reduction, ammonification, denitrification, nitrification, nitrogen fixation ...)
ammonia, equilibria of the marine multiphase system ... 5823
North Sea; sediments, sandy and silty ... 6291

nitrogen fixation (More at NITROGEN CYCLE ...)
bacteria, heterotrophic; in Spanish, English abstract ... 3756

molybdenum-dependent; sulfates, high concentrations, not limited by ... 4271
nitrogen metabolism
bacteria, methanotrophic ... 6486
noble gases
basalts, submarine glasses; seamounts, Loihi; mid-ocean ridges ... 4749
nodule<s> (See also micronodules ...)
nodules
Indian Ocean, Central Basin; sediments; lebensspuren ... 5302
distribution, geotechnical properties; North Pacific, E; clay sediments ... 5442
nodules: ferromanganese
sediments, surrounding ... 4174
shape characteristics ... 4175
Guatemalan Basin, S ... 4176
Mid-Pacific Mountains ... 4805
Pacific; Clarion-Clipperton Fracture Zone ... 4808
Clarion-Clipperton Fracture Zone ... 5443
nodules: manganese
Pacific; rare earths ... 3675
Indian Ocean, central ... 3676
minerals, Mn-bearing; metals, elemental; relationships ... 3677
compositional evolution ... 4806
nodules: polymetallic
Indian Ocean, Central Basin ... 5444
mineralogical evolution; in French, English abstract ... 5967
noise (More at SOUND ...)
ocean, influence on; internal waves; wind ... 4491
ambient; acoustics, imaging ... 4495
vector and phase structure; sound channels, new type; acoustics ... 4507
VLF ambient; Beaufort Sea, icecap, beneath; seafloor, beneath ... 4524
sea ice, breakup; floes, interactions; sound ... 4525
ambient; Alaska; fjords ... 5099
noise: seismic
Canary Upwelling; Reykjanes Ridge ... 4813
Nolaclusilis
hudsonicus n.sp., n.fam.; Hudson River, Estuary; Ciliata, tintinnine ... 4303
bicornis n.gen., n.sp.; Chesapeake Bay; Tintinnidiidae ... 4304
nonlinear phenomena
stochastic phenomena; mathematical analysis, the grand challenge for partial differential equations ... 3813
North America
W coast; South America, W coast; Hawaiian Archipelago; tides, tables, 1992 ... 4438
E coast; South America, E coast; Greenland; tides, tables, 1992 ... 4439
W; Mesozoic; exotic terranes; marginal seas ... 4735
North Atlantic (More at Atlantic ...)
NW; circulation, mean; eddies ... 3281
circulation, model; kinetic energy analysis ... 3287
E; wind-driven currents, fluctuations; correction ... 3296
over, case study; heat flux, latent ... 3427
W, shelf water; particulates, submicron ... 3503
Feni Ridge; sedimentation, and climate ... 3562
past 10 myr; sedimentation, terrigenous ... 3565
Late Quaternary; Pteropoda; climate; sediments, preservation in ... 3616
Blake Bahama Basin; Jurassic, Upper; calcareous nannofossils ... 3617
King's Trough; propagating rifts; reactivated pseudo-fault ... 3628
International Council for the Exploration of the Sea; retrospective ... 3817
W, bottom water; deep circulation ... 3870
water masses, formation ... 3891
from; U.K., contributions to S budget; sulfur, natural species ... 3986
Gorringe Ridge; crust, structure ... 4140
Georges Bank, S; stratification, annual cycles ... 4385
great Salinity Anomaly, possible relationships to; Arctic Ocean, basin; atmospheric circulation, winter ... 4580
clouds, presence, role; circulation, large-scale general ... 4602
U.S. coast; cyclogenesis; physical mechanisms influence ... 4609
organic matter; carbon dioxide, in surface water; relationship ... 4645
Rockall Plateau; Dinoflagellata, cyst, biostratigraphy; fossil record ... 4705
Cobb Mountain Subchron; sediments; paleomagnetism ... 4712
coast; U.S.; margin, divergent, formation ... 4734
Azores-Gibraltar belt; seafloor; seismicity ... 4772
seismic anisotropy; mantle ... 4774
fracture zones ... 4780
W; nutrients, control by; photosynthesis; phytoplankton ... 4860
E; phytoplankton, spring bloom, influence of; carbon dioxide; oxygen ... 4868
E; ichthyofauna, demersal; abyssal zone ... 4880
NW; Thunnus, thunnus; elements, 24, concentrations; tuna, bluefin, in ... 4948
E of Azores; water masses ... 5053
Norwegian Sea; water masses, exchange ... 5054
W; Scotian Shelf; mercury, reactive ... 5177
surface waters; organic matter, DOC ... 5222
E, episodic preservation in; pteropod ooze ... 5279
climate, and paleohydrologic changes; sedimentation, clay, impact on; in French, English abstract ... 5290
DSDP Site 608; Miocene; fossil record, nannofossil chronology ... 5351
mercury, changes in concentrations; seabirds, feathers as indicators ... 5580
Vestimentifera, growing on; shipwrecks ... 5625
W; circulation; altimetry, calibration to geopotential anomaly and isotherm depths ... 5648
along 24°N; Sverdrup circulation ... 5660
E; currents ... 5672
over; cloud albedo; natural vs anthropogenic factors ... 5756
Davis Strait; carbonate dissolution; sediments ... 5847
carbon, organic, distribution; organic matter; glaciation, last maximum ... 5854
insolation, influence; glaciation, effects; atmospheric circulation ... 5885
E; circulation; continuous assimilation in an open domain ... 6162
E, April and August; Foraminifera, planktic, as indicators; water masses, surface ... 6190
NE; atmospheric convection, cellular ... 6254
Biscay Gulf, paleoceanography; Paleocene; Eocene, earliest; sediments, biostratigraphy; fossil record; in French, English abstract ... 6364
central, evolution; Mesozoic; Canary Basin; magnetic field, anomalies ... 6373
abyssal fauna, studies; submersibles ... 6470
Faroe shelf; Scleractinia; Lophelia, pertusa; corals, bank-forming, deepwater; fauna, associated ... 6473
North Carolina
Neuse Estuary; suspended matter; particulates ... 4033
mesohaline estuary; zooplankton, abundance; community structure ... 4214
off; fronts, coastal; rainbands ... 5138
slope, distribution on; Foraminifera; Bathysiphon, filiformis, major ... 5557
Topsail Sound; salt marshes, development ... 6326
North Equatorial Countercurrent
annual cycle; Atlantic; currents, and countercurrents ... 6184
North Equatorial Current Trans-Atlantic Research (Use NECTAR)
North Fiji Basin
Lau Basin; basalts, MORB; interpretation of bathymetric data and photographs ... 5244
Lau Basin; South Pacific, W; hydrothermalism; tectonics, and geological evolution ... 5245
sediments, geochemistry ... 5294
Lau Basin; sediments; calcareous ooze, volcanic ash, metalliferous deposits ... 5300
Lau Basin; sediments; pumice, and ash layers, composition and origin ... 5305
Lau Basin; hydrothermal mineralization ... 5315
Lau Basin; hydrothermalism; geological evolution ... 5316
Lau Basin; sedimentation, rates; productivity, paleo-; stable isotope stratigraphy ... 5348
Lau Basin; magnetic field, anomalies ... 5362
basalts, petrology, tectonic setting ... 5397
Lau Basin; volcanic rocks, origin, alteration ... 5406
North Pacific (More at Pacific ...)
glacial subarctic; water masses, conversion; physical constraints, stable isotope record ... 3613
NE; Asteroidea; biogeography, of origin and radiation; fossil record; sand dollars, dendrasterid ... 3614
circulation, upper ocean GCM ... 3861
W; tritium ... 3894
W; baroclinic instability, role; currents, energetics ... 3921
W; typhoons, activity; climate, variation ... 3979

selenium, dissolved ... 3993
W, relief characteristics; bottom topography ... 4067
subarctic; Dinoflagellata; Gymnodinium, sp., growth and grazing rates ... 4232
W subarctic; water masses, and water systems; in Japanese, English abstract ... 4428
W; Subarctic Front; water masses ... 4433
Oyashio; atmospheric circulation; in Japanese, English abstract ... 4587
sediments; paleomagnetism, Olduvai termination ... 4715
W; subduction zones; earthquakes, migration along ... 4776
W; lithosphere, seismic properties ... 4786
bottom topography; gyres, subarctic, seasonal cycle ... 5026
circulation, GCM response; surface temperature, anomaly 5139
silica, double maximum ... 5180
E; clay sediments; nodules, distribution, geotechnical properties ... 5442
subarctic, effects; metals, Fe, Mn, Cu, Zn enrichments; productivity, and biomass ... 5465
subarctic; iron, limited; productivity; phytoplankton, ecological dynamics ... 5483
subarctic; phytoplankton, growth, herbivory; chemotaxonomic analysis ... 5499
central; abyssopelagic fauna ... 5500
Horizon Guyot and Magellan Rise; bacterial biomass, and production; seamounts, water column over ... 5522
rare earths; seawater, determinations in ... 5795
W; Mesozoic; magnetic field, isochron chart ... 5914
SW of Hawaii; crust, properties ... 5949
central; phytoplankton, species structure; gyres, center and edges ... 6005
currents, barotropic response; atmosphere, forcing by ... 6175
remote, over; Asia, E, over; atmospheric dust, concentrations 6268
central; Sargasso Sea; organic matter, DOC; carbon, C-14 activity ... 6299
E; fault zones, Blanco Transform morphology; tectonics, evolution ... 6379

North Pacific Experiment (Use NORPAX)

North Sea
physical oceanography ... 3267
and Danish Belts, operational hydrographic warning system; storm surges; tides, extreme ... 3465
case study; seismology; petroleum reservoirs, sonics ... 3526
Scapa Field; Cretaceous, Lower; sandstones, distribution; palynology ... 3558
central; Pliocene, -Pleistocene; Foraminifera; sediments, stratigraphy and correlation ... 3593
Quaternary, succession; sediments ... 3605
Viking Graben; sediments, thermal state; exploration well data ... 3622
example from the Viking graben; faults, small, extension ... 3661
offshore oil, and gas ... 3673
zooplankton biomass; productivity ... 3708
pelagic ecosystems, stressed; plankton ... 3729
Clupea, harengus, autumn-spawned; herring, larval, distributions ... 3734
Clupea, harengus; feeding, effects on; herring, larval, infection by helminth parasites ... 3735
coastal waters; environmental impact; waste discharges, liquid ... 3827
ocean dumping ... 3828
coastal and estuarine zones; environmental conservation .. 3831
sea use management, and planning ... 3836
sea use management, and planning ... 3837
legal regimes ... 3838
PCBs ... 4050
suspended sediments, dispersion; lead, transport ... 4051
exploration seismology; hydrocarbons ... 4172
N; circulation, seasonal ... 4419
Holocene, Late; U.K.; sea level, trends compared ... 4441
model; tides; storm surges ... 4442
Beryl Basin; Triassic; sedimentation, tectonic and climatic controls ... 4692
ecological modelling ... 4820
zooplankton ... 4834
coastal zones; Phaeocystis, sp. blooms; eutrophication 4861
macrobenthos ... 4885
international law; environmental protection ... 4986
circulation; fish stocks, recruitment ... 5035
aerosols; particulates, mass analysis ... 5167
Southern Bight; aerosols; particulates, characterization .. 5169
aerosols; particulates, giant ... 5170
Netherlands; carbon dioxide; oxygen; seasonal behavior .. 5186
W; sediments, coastal; alkylbenzenes, distribution ... 5233
Paleocene; goldmanite, detrital; sediments ... 5284
Brent Group; Jurassic, Middle; magnetic field, stratigraphy 5325
Outer Moray Firth; Paleogene, revised; sediments, lithostratigraphy ... 5336
Brent Group; Jurassic, Middle; sediments; paleomagnetism ... 5360
S; sediments, sandy; macrofauna; trawling, beam-, effects 5504
macrofauna, biomass, density, diversity ... 5507
ecology; symposium; benthic communities ... 5508
Copepoda, density, biomass, distribution; meiobenthos, communities ... 5510
S; Foraminifera, benthic, distribution and population dynamics ... 5559
lead, bioavailability; sediments ... 5572
offshore oil; production installations; benthos, impacts on ... 5573
pollution; fish diseases; review ... 5581
currents, ADCP data; tides, models ... 5696
inorganic N, S, and Cl species; atmospheric particles ... 5778
Belgian sector; Tertiary; sediments, erosion surface ... 5838
nitrogen cycle; sediments, sandy and silty ... 6291
sand ridges, tidal; stratigraphy ... 6325
Danish; faults, salt-related listric growth; displacement history, salt kinematics ... 6431
Fulmar Reservoir sandstones; oil, emplacement effects; sediment diagenesis ... 6443
symposium papers; benthic ecology ... 6471
benthic infauna ... 6476

North Sea Wave Model (More at WAVE DYNAMICS ...)

North-east Atlantic Dynamic Studies (Use NEADS)

Northern Hemisphere
greenhouse effect; climate warming; ice sheets, will they grow? ... 3422
circulation, regimes; El Niño, extremes, during ... 3966
wintertime extratropics; atmospheric circulation, GCM ... 3969
sea ice; forecasting, systems ... 5719
ice-ocean interactions, coupled model ... 6216

Northwest African Upwelling (See also Canary Current Upwelling ...)

Norway
Draugen shelf; Quaternary; sediments, stratigraphy ... 3585
Prymnesium, parvum; toxic blooms ... 4825
Froan breeding ground; seals, pups, chronic oil-fouling; oil pollution ... 4946
Storegga slides, simulation; tsunamis; sediment failures ... 5699
W, Barsnesfjord; anoxic sediments ... 5863
W; Radiolaria, fauna from sediments and plankton; fjords .. 6056

Norway Basin
Aegir Ridge; spreading zones, extinct; tectonics ... 6387

Norway-Greenland Basin
fault zones, transform, Malloy; mid-ocean ridges ... 4141

Norwegian Channel
sediments; bedforms; pockmarks, geological control ... 6341

Norwegian Sea
Hammerfest Basin; Cenozoic, early; sedimentation ... 3594
macrobenthos, bathyal, abyssal; ecology and bathymetry ... 3748
cold air outbreaks; atmosphere ... 4595
nuclear submarines, sunken; environmental monitoring . 4973
North Atlantic; water masses, exchange ... 5054
Greenland Sea; Foraminifera, benthic morphotypes, Recent 5354
circulation; water column, thermohaline structure ... 5652
-Greenland Sea; volcanic islands, Jan Mayen; crust, basal complex petrology, geochemistry ... 5937

Nova Scotia
Sable Island; litter, persistent; pollution monitoring ... 5609
shelf communities; Saint Lawrence: Gulf of, outflow; zooplankton, effects on ... 5996

nuclear power plants (More at POWER ...)

nuclear submarines
sunken; Norwegian Sea; environmental monitoring 4973

nuclear waste (See also radioactive waste; fallout; more at RADIOACTIVE MATERIALS, WASTE ...)

nucleic acids
dissolved, determination; seawater ... 5197

null hypothesis
debate; statistical analysis; costs and rationality in ecological inference ... 4823

numerical modelling
U.S., Fleet Numerical Oceanography Center operations and products; forecasting ... 6514

nutrient<s> (More at TROPHIC DYNAMICS ...)
nutrient transport
Louisiana; bayous ... 4021
relative importance of biotic, abiotic vectors ... 6289
nutrients
and chemistry; Canary Islands, waters around; temperature; salinity; in Spanish, English abstract ... 3266
metabolism as exchange determinant; sediments, organic-rich; in Spanish and English. ... 3496
status; Weddell Sea, winter; sea ice ... 3497
episodic inputs; atmosphere, from; pelagic ecosystems; role in chemical and biological dynamics ... 3950
vertical redistribution; carbon, -13, surface, effects on ... 4019
primary production; polar seas; Antarctic, Arctic parallels and contrasts ... 4020
iron, limitation, fertilization; greenhouse effect, and Leibig's law; relationships ... 4216
iron, limiting?; phytoplankton ... 4217
iron; phytoplankton nutrition; possible importance in regions of low biomass ... 4220
benthic fluxes; California, Tomales Bay; benthos, contributions to ecosystem metabolism ... 4629
regeneration; Bering Sea; oxygen, demand; sediments ... 4630
seasonal changes in concentrations; Japan, Hokkaido coast; in Japanese, English abstract ... 4631
N-, diel variations in uptake; Chesapeake Bay, plume; phytoplankton ... 4835
control by; North Atlantic, W; photosynthesis; phytoplankton ... 4860
tidal plumes, generation; productivity ... 4998
sea ice, beneath; chlorophyll; sampler ... 5085
cycling; organic matter, transport, fate; circulation, effects ... 5194
-rich conditions, open sea; productivity; hypotheses ... 5199
high; nitrates, low uptake rates; chlorophyll, low; oceanic ecosystems ... 5200
provinces in the sea; World Ocean ... 5201
-rich, maintenance; euphotic zone; physical processes ... 5202
Korea, Chinhae Bay; oxygen, dissolved; annual cycles ... 5203
dynamics, new production; Mediterranean Sea, E; eddies, warm-core ... 5204
high; iron, concentrations; chlorophyll, low; the case for Fe ... 5205
high; phytoplankton; productivity, what controls it?; chlorophyll, low; symposium ... 5217
depletion, impact; Southern Ocean, chemistry; atmospheric carbon dioxide; simulations ... 5227
-rich areas; pelagic ecosystems; grazing, role ... 5471
macro-, utilization; Southern Ocean; light, limitation; phytoplankton, biomass ... 5484
limitation; Ross Sea; silicon, role; diatoms ... 5487
fluxes; Spain, Ria of Vigo; organic matter, fluxes; red tides, relation to ... 5491
Mexico, Lagoon La Cruz, Sonora; seston; in Spanish and English ... 5804
and fertility; Iceland, seas around ... 5809
water column concentrations; upwelling, influence; salt marshes, fluxes ... 5810
Weddell Sea, -Scotia Sea, during winter; particulates, biogenic; productivity; nitrogen, uptake ... 5978
light, limitation; algal blooms; coagulation, effects ... 5984
availability; macroalgae, in siliciclastic vs carbonate-rich waters ... 6059
limitation; Penicillus, capitatus; seagrass beds, Bermuda ... 6060
concentration scales; eutrophication; oligotrophy; evaluation ... 6114
Southern Ocean, Indian sector; elements, major; plankton biomass ... 6132
limitation; Chesapeake Bay; phytoplankton ... 6458
metals, heavy; plankton, in enclosures, effects on ... 6509
nutrition: phytoplankton
iron; nutrients; possible importance in regions of low biomass 4220
Nyctiphanes
capensis; Algoa Bay; Euphausiacea; krill, distribution, biomass ... 6047

oblique spreading (More at SPREADING ...)
ocean (See also COASTS, CURRENTS, FRONTS, GRADIENTS, INTERFACES, LAYERS, Secchi depth, SOFAR channels, sound channels, STRUCTURE, surface-, upwelling, water masses, ZONES; more at WATER ...)
Ocean Drilling Program
overview ... 4970
ocean dumping (More at DUMPING ...)
North Sea ... 3828
ocean floor (More at FLOOR ...)
ocean fronts (More at FRONTS ...)
ocean injection
carbon dioxide, sequestration ... 6099
ocean resources (More at RESOURCES ...)
ocean surface (More at SURFACE ...)
ocean thermal energy conversion (Use OTEC)
ocean-atmosphere interactions (More at AIR-SEA INTERACTIONS ...)
circulation modelling, coupled GCMs; in French, English abstract ... 3430
mixed layer, upper ocean, response to atmospheric variability ... 3433
water column, stratified, effects on; meteorological forcing, response to ... 3434
Southern Ocean; ice-ocean interactions; coupled model studies ... 3436
sea ice, thin, over; energy exchanges ... 3437
Pacific, W tropical; water masses, W Pacific warm pool; circulation, air and sea ... 3858
barocoupling; air-sea interactions; circulation, general ... 3949
El Niño, 2-yr and 1-yr ... 3964
climate, shifts; weather, patterns ... 4558
El Niño; Quasi-Biennial Oscillation ... 4567
atmospheric carbon dioxide, changes; seasonal responses ... 4575
circulation, general air and sea; temperature, role ... 4576
temperature, changes, air and sea; air-sea interactions ... 4578
heating, upper ocean; atmosphere, by ... 4579
Atlantic; climate, variability ... 5130
El Niño; Southern Oscillation, and ENSO; history of the terminology ... 5134
atmospheric circulation; heat flux, anomalies ... 5137
circulation, general; El Niño, ENSO simulations ... 5141
Pacific; El Niño, ENSO anomaly mode development ... 5151
storms, oceanic response ... 5153
mixed layer, ocean; modelled decadal fluctuations ... 5741
circulation, coupled, GCMs; data assimilation, predictability ... 5745
circulation, prediction, coupled system ... 5748
Atlantic; Arctic Ocean; weather forecasting, FOAM model ... 5786
Pleistocene, plankton and pollen records; Labrador Sea; climate change, responses to ... 5879
climate, long-term simulations; ice-ocean interactions ... 6242
surface temperature, Arabian Sea; monsoon rainfall, India; associations ... 6250
surface temperature, North Atlantic; monsoons, South Asia; relationship ... 6251
Atlantic; hurricanes, formation; role of environmental asymmetries ... 6260
oceanic boundary layer (More at BOUNDARY LAYERS ...)
oceanic circulation (More at CIRCULATION ...)
oceanic electric field<s> (More at ELECTRIC FIELDS ...)
oceanic heat fluxes (More at heat ...)
oceanic temperature (More at TEMPERATURE ...)
oceanographic apparatus (See also BUOYS, DROGUES, fish (towed), FRAMES, GAUGES, hydrophones, METERS, pingers, profilers, RECORDERS, SAMPLERS, seismometers, sonar, TANKS, towing, transducers; more at REMOTE SENSING, satellites, STRUCTURES, vehicles, VESSELS ...)
oceanographic modelling
and products; U.S., Fleet Numerical Oceanography Center ... 6513
oceanographic symposia
OCEANS '90 held in South Africa ... 4972
oceanography
data assimilation; signal processing; meteorology ... 3812
history of scientific and technical assistance; global commons; developing countries ... 4357
physical; South Africa, 1987-1990 ... 4992
oceanography: history of
oceans; marine research; proceedings ... 4356
Heezen: Bruce A. ... 4994
Stommel: Henry M.; obituary ... 6129
oceans (Southern Ocean and World Ocean are used in this index; North Atlantic, South Atlantic, North Pacific, South Pacific, Indo-Pacific and circum-Pacific are used as well as Atlantic and Pacific; in addition to searching under an ocean name, search narrower geographic, physiographic and zonal designations; if searching a near-shore area use country and continent names too ...)

history of oceanography; marine research; proceedings .. 4356
uptake by, revised budget; carbon dioxide, anthropogenic ... 5228
Ockham's razor
Bayesian analysis; hypothesis selection 4964
Octocorallia
competition, strategies 6011
octopus
primates of the sea; Cephalopoda; intelligence, predatory nature; educational 3845
odor plumes
aquatic; finestructure, 3-D, spatial information 3809
offshore (More at INDUSTRY ...)
offshore drilling (More at drilling ...)
offshore oil
and gas; North Sea 3673
North Sea; production installations; benthos, impacts on 5573
offshore platforms (More at platforms ...)
offshore structures (More at STRUCTURES ...)
floating platform location; positioning, accurate GPS measurement 6089
oil (More at HYDROCARBONS, ORGANIC COMPOUNDS, PETROLEUM ...)
crude, sunlight induced alterations; petroleum photochemistry 4623
chemical biomarkers to track spills; San Francisco Bay; sediments 4649
hydrocarbons, indicator techniques; exploration geology; gas; annual geophysical report 4801
generation, loss, half-life; petroleum resources, global 4802
petroleum, occurrences, exploration, retrieval, geology; status of research and methods 1992 5439
products; toxicity testing, recommendations; petroleum ... 6073
emplacement effects; North Sea, Fulmar Reservoir sandstones; sediment diagenesis 6443
Gastropoda, effects on; dispersants; intertidal zone; in Korean, English abstract 6507
oil: crude
marine; carbon, isotopic composition 6442
oil exploration (More at exploration ...)
oil: offshore
and gas; North Sea 3673
North Sea; production installations; benthos, impacts on 5573
oil pollution (See also blowouts, slicks; more at POLLUTION ...)
Norway, Froan breeding ground; seals, pups, chronic oil-fouling 4946
Kuwait, and Arabian coasts; AVHRR monitoring 4975
bacteria; petroleum biodegradation 5584
Texas, salt marsh; Spartina, alterniflora 6083
oil production (More at POWER ...)
oil slicks
at sea, acoustic observations 5603
films, drift velocity 5828
oil smoke
Kuwait; fires, postwar; atmosphere, effects 5783
oil spills
Exxon Valdez; bacteria, marine; hydrocarbons, interactions with 3799
Great Barrier Reef, ReefPlan; contingency plans inadequate 3829
U.S., Oil Pollution Act; law; pollution 4985
cleanup; sorbents, natural 5604
Exxon Valdez; petroleum, detection via TM signature 5613
Brachyura; Uca, pugnax, effects of washing 6070
Exxon Valdez; pollution bioremediation 6118
fingerprinting 6310
oil tankers (More at TANKERS ...)
okadaic acid
Adriatic Sea; mussels, in 6072
Okhotsk: Sea of
to; Soya Warm Current; currents, volume transport; freshwater, supply; in Japanese, English abstract 4404
marginal ice zone; structure, dynamics 5717
Kuril Basin; circulation; eddies, formation 6174
Paramushir gas hydrate seeps; Bivalvia, Conchocoele community; sediment diagenesis, early; food chains 6480
Okinawa Trough
CLAM hydrothermal field; alkalinity, high; sulfates, reduction, due to 3566
backarc basins; report on DELP cruises 4062
spreading centers; basalts, chemistry, isotopics 6422
Mid-; vent fauna; stable isotope ratios 6475
Oligocene
to present; Red Sea, E margin, N Yemen; magmatism 4138
Late, and Early Miocene; Australia; Foraminifera, reticulate globigerines; fossil record 5349
oligotrophy
nutrients, concentration scales; eutrophication; evaluation . 6114
olivine
metastable tongue, waveform effects; subducting slabs; crust 3668
metastable; subduction, downgoing slab 5424
in; hydrogen, solubility; mantle, water storage implications . 6406
Oman
margin; organic matter, preservation; sediments, in 4100
Oman: Gulf of
Arabian Gulf, S; oxygen; phosphate 3500
Ontong Java Plateau
Site 586; Pliocene, -Pleistocene; oxygen, isotope record 5347
ooze (More at SEDIMENTS ...)
pelagic, relationships; sediments, fabric; microfossil taphonomy 5901
ooze: pteropod
North Atlantic, E, episodic preservation in 5279
opal
biogenic; Southern Ocean; sediments 4689
biogenic; Pacific, W equatorial; Foraminifera, benthic; productivity, glacial to postglacial changes 5886
ophiolites (More at IGNEOUS- ...)
supra-subduction zone origin; Bay of Islands, and Little Port complexes 3658
Northland; New Zealand; South Pacific, W, evolution; tectonics, implications 4160
Cyprus, Troodos; crust; magnetization, processes 4765
emplacement initiation; Japan Arc, Okushiri Ridge as example 5431
Trinity; California, N; spreading centers, fossil; magma, petrogenesis 5932
Cyprus, Troodos; brines, generation and circulation; crust, in 6349
ophiolitic ores (More at ORES ...)
optical characteristics
calculating; scattering media, complex; reference points 4967
optical oceanography (More at LIGHT, seawater ...)
optics: aerosol
Mauna Loa, at; long-range transport 5776
optics: seawater
Raman scattering and internal radiant emission 4487
bio-; irradiance, fluctuations 5496
orbit: Earth
forcing by; sedimentation, rhythmicity; geological record . 6339
orbits: satellite
Molniya; conference summary 4966
Orca Basin
anoxic sediments; lipids, *Spartina*, selective alteration 5221
bacteria, archaebacterial activity; anoxic brines 5524
Orcinus
implications for the evolution of foraging specializations; Cetacea; whales, killer 4243
ore (More at MINERAL RESOURCES ...)
Oregon
margin, off, Secoma Fault; faults, strike-slip 6405
organic compounds (See also ectocrines, HYDROCARBONS, sterenes, sterols, wax esters, yellow substance ...)
organic matter (See also humus ...)
dissolved compounds; Black Sea, distribution and biological turnover in 3495
N, P, C; Mediterranean Sea, Egyptian Shelf; sediments, distribution in 3499
DOC; New Jersey, estuaries and offshore waters; trace metals 3516
sediments; fisheries, effects of commercial dragging 3808
-mineral interactions; carbon dioxide, transfer to the deep ocean; atmosphere, as source 3954
terrestrial; Delaware Estuary; sediments 4012
carbon; Southern Ocean, between Elephant and South Orkney islands; sea ice, zone 4014
biogeochemistry; lipids, biomarker approach, trends in 4015
sinking; Southern Ocean, Atlantic sector; plankton; stable carbon isotopes 4024
POC, composition; Weddell Sea, and Scotia Sea; silica, biogenic, distribution; particulates 4027
Weddell Sea; particulates, C and N isotopic variations 4029
biohydrochemistry; Black Sea 4034
carbon; Antarctica, around; silica, biogenic; sediments, cycling and accumulation in 4084

preservation; Oman, margin; sediments, in 4100
carbon flux; Weddell Sea; sediments; oxygen, penetration 4101
subduction zones, Franciscan and Cedros complexes; petroleum, missing 4171
macrophyte; sediments; pigments, photosynthetic, as tracer . 4307
DOC; seawater, determinations in; high-temperature catalytic oxidation method 4620
dissolved; World Ocean, bulk chemical characteristics in 4627
particulate; Kuroshio; rings, warm-core; N and C isotopics .. 4636
mineralization, kinetics; sediments, anoxic, in 4640
North Atlantic; carbon dioxide, in surface water; relationship 4645
amino acids, and fatty acids; phytoplankton, production by 4838
Antarctica, Breid Bay; phytoplankton blooms 4840
monosaccharides; photosynthesis, production during; phytoplankton 4843
residence time; sediments; biomass; benthos 4894
sediment; sulfur, -containing pyrolysis products; chemical analysis 5175
DOC; fluorescence, in seawater 5189
DOC; Southern Ocean, Atlantic sector; Polar Frontal Zone 5191
DOC; Atlantic; Pacific; Southern Ocean 5193
transport, fate; nutrients, cycling; circulation, effects 5194
DOC; seawater; analysis methods compared 5195
sedimentary; Tasmania, Macquarie Harbor; trace elements; humic matter; chemistry 5216
DOC; North Atlantic, surface waters 5222
C accumulation; Mediterranean Sea, E; Bannock Basin; sapropels, role of productivity in formation 5274
fluxes; Spain, Ria of Vigo; nutrients, fluxes; red tides, relation to 5491
carbon; Goa, Mandovi Estuary; sediments 5802
Texas, Houston Ship Channel; carbon, stable isotopic analysis; seawater; sediments 5826
early diagenesis; sediments; carbon, isotopic composition alteration 5850
North Atlantic; carbon, organic, distribution; glaciation, last maximum 5854
flux; Adriatic Sea, N; Foraminifera, benthic 5897
degradation; sediments, pelagic; microbiota 6031
flux rates; Baltic Sea, Kiel Bight; Foraminifera, response .. 6051
flux; Foraminifera, benthic; oxygen, content 6055
LMW compounds; natural waters; trace analysis, NMR spectroscopy 6286
particulate; Hiroshima Bay; decomposition, characteristics 6288
DOC; North Pacific, central; Sargasso Sea; carbon, C-14 activity 6299
alteration; Juan de Fuca Ridge, Middle Valley; hydrothermal petroleum; sediments 6351
carbon, flux; Tunicata, Pyrosoma atlanticum; phytoplankton, standing stock, impact on; grazing 6454
dissolved; Canary Upwelling; chlorophyll; fluorescence, variability 6461
DOC; colloids, transport; bacteria, utilization; relationship . 6485
organic metal complexes
Cu, Ni; sediment slurries, dissolved phase 4002
organic molecules
origin of life; endogenous production, exogenous delivery, and impact-shock synthesis; review 3847
environmental persistence prediction 5831
organic pollutants
hydrophobic; water solubilities 5829
Pacific, W, surface waters 6312
organism<s> (See also BIOTA, FAUNA, FLORA ...)
organisms
as sensors; pollutants; bioavailability 4183
organochlorine pesticides
intertidal macrofauna; chlordane, effects 4955
organochlorines
heterogeneous distribution; Cetacea; whales, baleen, blubber; implications for sampling procedures 3798
Arctic Ocean; PCBs; pesticides, chlorinated; food webs . 3802
PCBs; toxicities, debatable; report 4378
volatile, sources and fate; Mersey Estuary; pollution 4651
pollution; pesticides; global commons, viewpoint 4976
Alaska, Kodiak; Pinnipedia, harbor seals; Phoca, vitulina richardsi; chemicals, toxic 5575
HCB, TCB, chloroform; Forth Estuary; Scotland 5827
France, Atlantic coast; metals; pollution, flounder muscle as indicator 6071
German Bight; Asterias, rubens 6077
dioxins, dibenzofurans; Sweden, coast; Baltic Sea; hydrocarbons, PAHs; pollution, flux estimates, pattern recognition of particulates 6309
inflow, levels, fate; Adriatic Sea, Rijeka Bay; hydrocarbons, chlorinated 6311
PCBs, DDTs, HCB; Antarctica; Ross Sea, Terra Nova Bay; fish 6505
origin of life (More at EVOLUTION ...)
organic molecules; endogenous production, exogenous delivery, and impact-shock synthesis; review 3847
Orinoco River
outflow; Caribbean Sea, superficial waters; water masses, contribution to; in Spanish, English abstract 6189
ornithology (More at BIRDS ...)
orogenies
magmatism, evolution; Tethysides; tectonics 3646
oscillations (More at WAVES ...)
oscillations: atmospheric
El Niño, ENSO LF changes 3953
oscillations: basin 4447
subsurface; Bengal: Bay of 5712
oscillations: bubble
in inviscid fluid 5722
oscillations: inertial
decay 4418
oscillations: sea level
Australia, W, Esperance Harbor 6205
oscillations: stratospheric
QBO; El Niño 4586
oscillatory flow
sediments, beds, over; velocities and concentrations 3391
osmium
Black Sea; sediments, geochemistry; rhenium 3491
osmotic pressure (More at PRESSURE ...)
Ostracoda
Cyprideis, torosa; chemistry, ornamentation; in French, English abstract 3772
planktonic; Ross Sea; Halocyprididae 4917
anchialine; Galapagos Archipelago; Cyprididae, and Paracypridinae reviewed 4923
Pacific; vent fauna 6500
OTEC (More at POWER ...)
outer continental shelf (Use OCS)
Outer Continental Shelf Environmental Assessment Program (Use OCSEAP)
outfalls (More at WASTE DISPOSAL ...)
outfalls: sewage
near; Arabian Gulf, Dubai Creek; macrobenthos 4950
outfalls: wastewater
Antarctica, McMurdo Station; mixing characteristics 6119
outgassing: mantle
magma; basalts, MORB glasses, He and Ar in 3649
Owenia
fusiformis, transport; France, Bay of Seine; Polychaeta 5541
oxidation
rate; Black Sea; hydrogen sulfide 3485
capacity, past and future changes; atmosphere 5773
oxygen (See also BOD ...)
Black Sea, isotopic composition; hydrogen 3481
deficits, integrated modelling; Denmark, seas around 3494
Arabian Gulf, S; Oman: Gulf of; phosphate 3500
sediments, estuarine, bioturbated; nitrogen; transformations 3752
and sulfide profiles, measurement device; sediments 3992
dissolved, diel dynamics; Mexico, Cancun; eutrophication; lagoons, tropical 4011
penetration; Weddell Sea; sediments; organic matter, carbon flux 4101
content, box models; primordial atmosphere, evolution 4110
demand; Bering Sea; nutrients, regeneration; sediments .. 4630
marine isotopic record; Neogene, Late; Milankovitch cycles; linear and nonlinear couplings 4693
North Atlantic, E; phytoplankton, spring bloom, influence of; carbon dioxide 4868
North Sea, Netherlands; carbon dioxide; seasonal behavior 5186
dissolved; Korea, Chinhae Bay; nutrients; annual cycles ... 5203
rapid redistribution; sediments, in; flow, velocity 5214
isotope stratigraphy; Lau Basin; Foraminifera 5345
isotope record; Pliocene, -Pleistocene; Ontong Java Plateau, Site 586 5347
pore-water content; California, central, slope and rise; Foraminifera, benthic, distribution and biomass 5555

deficiency increasing; Baltic Sea, Kiel Bay; hypoxia; eutrophication, paradigm ... 5568
deficiency; India, Hooghly Estuary; hypoxia ... 5800
uptake kinetics; Baltic Sea, Puck Bay; sediment-water interface ... 5820
low content; Nautilus, pompilius, behavior and physiology ... 6009
content; Foraminifera, benthic; organic matter, flux ... 6055
isotopic studies; World Ocean; silica, biogenic; temperature, changes recorded ... 6366
oxygen: atmospheric
regulation; carbon, organic, burial efficiency; bottom water, oxygen content; relationships ... 4035
geological record, throughout ... 4111
oxygen flux
sediment structures, biogenic; sediments, into; in German, English abstract ... 6300
oxygen minimum layer (More at LAYERS ...)
Oyashio
long-term variability; currents; sea level ... 4410
currents, net geostrophic transport balance; flow, path; in Japanese, English abstract ... 4411
characteristics; currents; in Japanese, English abstract ... 4415
currents; collection ... 4552
North Pacific; atmospheric circulation; in Japanese, English abstract ... 4587
waters, variations in; zooplankton biomass; in Japanese, English abstract ... 4847
oysters (More at SHELLFISH ...)
ozone
Pacific, over; troposphere; nitric oxide ... 6264
ozone: polar
special issue ... 6262
ozone: stratospheric
depletion; Antarctica, waters around; radiation, UV; phytoplankton, biology ... 4865
measured trends ... 5166
equatorial; annual, quasi-biennial and ENSO variations ... 5771
depletion; Antarctica; irradiance, UV, effect on ... 5772
Dobson records; Quasi-Biennial Oscillation; El Niño; Southern Oscillation ... 6237
depletion; Antarctica; biosphere, significance to ... 6265
atmospheric chemistry; INSTAC program ... 6266

Pacific (See also circum-, North- and South Pacific, and narrower geographic, physiographic and zonal designations ...)
tropical; temperature, SST and 20°C isotherm ... 3264
equatorial, hydrographic patterns; mixing, vertical ... 3268
Atlantic; thermohaline circulation; inter-ocean circulation modelled ... 3285
western; atmospheric convection ... 3438
W equatorial; El Niño; surface wind ... 3442
E, over; atmospheric fronts, cold; observations ... 3444
equatorial; carbon, POC; nitrogen, PON; particulates, in ... 3502
equatorial; calcite, preservation cycles; lysocline, depth, shape ... 3572
E tropical, and the East Pacific Barrier; paleoceanography; fossil record; biogeography ... 3584
Tethyan; Jurassic, Late; Cretaceous ... 3610
manganese nodules; rare earths ... 3675
equatorial; primary production, estimating ... 3701
equatorial; nitrate, utilization; plankton ... 3703
equatorial; primary production; fluorescence, data, from ... 3727
equatorial; nitrogen, productivity ... 3733
E tropical; porpoises; radionuclides, Pb-210, Cs-137, K-40 ... 3800
equatorial, along 150°W; productivity; WEC88 cruise result papers ... 3815
W tropical; water masses, W Pacific warm pool; ocean-atmosphere interactions; circulation, air and sea ... 3858
W tropical; air-sea interactions, coupled modes ... 3955
western; El Niño, ENSO origin modelled ... 3958
equatorial, origin in; tropical storms ... 3981
sediments; paleomagnetism; Japanese expedition results for 76 piston cores ... 4121
between Clarion and Clipperton fracture zones; fracture zones; crust, compression structures ... 4154
W tropical; phytoplankton, distribution, abundance; El Niño, ENSO events, effects ... 4196
subarctic; iron, limitation; productivity, ecosystem; ecological processes ... 4218
productivity, daily; bacterioplankton ... 4235
E; Copepoda, Siphonostomatoida; Aphotopontius, probolus sp.nov. ... 4284
history reviewed; paleogeography ... 4369
subequatorial; benthic storms ... 4407
sea level, as monitor; Kelvin waves, equatorial ... 4435
Mediterranean Sea; tsunamis, compared ... 4459
equatorial; irradiance, net surface solar, variability ... 4553
W; atmosphere, multiscale phenomena; tropics ... 4591
particulates, settling; metals, fluxes in pelagic oceans ... 4635
Clarion-Clipperton Fracture Zone; ferromanganese nodules ... 4808
tropical; chlorophyll, surface; merchant ship data ... 4832
E tropical; zooplankton, benthopelagic, feeding ecology; seamounts ... 4837
E, deep-sea; , benthic communities, structure; communities: benthic, structure; control by oxygen and organic matter gradients ... 4890
bacterioplankton; novel major archaebacteria group ... 4905
E tropical, 1986-89; El Niño, physical and biological effects ... 4997
W equatorial, variability; circulation ... 5023
tropical; El Niño, ENSO simulations; circulation, general ... 5145
El Niño, ENSO anomaly mode development; ocean-atmosphere interactions ... 5151
equatorial; carbon dioxide, in and over ocean; El Niño, 1986/88 to La Niña 1988/89 ... 5164
surface equatorial; iron, (II) measurement ... 5179
Atlantic; Southern Ocean; organic matter, DOC ... 5193
lithosphere; magnetization ... 5368
circum-; Paleozoic, Late, to Early Mesozoic; Japan, SW; Korea, South; tectonics, orogenic belt evolution ... 5373
W; subduction, subducting slabs stagnant; mantle, transition zone ... 5419
Nova-Canton Trough; fracture zones, new evidence of one; tectonics ... 5427
tropical biogeography ... 5451
equatorial; primary production, rate regulation ... 5453
Johnston Atoll, distribution around; fish larvae ... 5455
equatorial; phytoplankton, growth, grazing and sinking rates; iron, limitation ... 5461
E tropical; upwelling; productivity ... 5469
central equatorial; productivity, new; phytoplankton ... 5488
equatorial; El Niño, and La Niña, effects; seabirds, assemblages ... 5519
World Ocean; circulation; currents; modelling, ocean prediction ... 5638
tropics, ocean conditions diagnosis, 1990 ... 5643
W; buoyancy, profiles; fluid dynamics; empirical orthogonal modes ... 5728
W tropical, over; atmospheric temperature, structure; El Niño, development, during; in Chinese, English abstract ... 5735
E, over; tropospheric transport, and mixing ... 5751
W; equatorial precipitation; rainfall; El Niño ... 5761
tropical marine boundary layer; particulates, size distributions; methanesulfonate ... 5779
W; atmospheric aerosols; seawater; suspended matter ... 5782
mercury, sources, composition; precipitation ... 5784
W equatorial; Foraminifera, benthic; opal, biogenic; productivity, glacial to postglacial changes ... 5886
equatorial, changes inferred from temperature record; Quaternary; upwelling; productivity ... 5890
equatorial; currents, ADCP; CTD, data ... 6156
Indian Ocean; thermohaline circulation ... 6166
Indian Ocean; surface heat, balance; El Niño, mature phase 1982-83 ... 6253
W; El Niño, 1986-89 ENSO cycle; atmospheric circulation ... 6255
W tropical; atmospheric convection, deep; precipitation, associated, effects; surface energy budget ... 6256
over; troposphere; nitric oxide; ozone ... 6264
tropical; particles, sea-salt; tropospheric aerosols ... 6270
hydrocarbons, light nonmethane; atmospheric chemistry ... 6271
particulates; proteins, occurrence, characterization ... 6297
W, surface waters; organic pollutants ... 6312
E equatorial, ODP Leg 138; Cenozoic, Late, high resolution studies; sediments; paleoclimate ... 6361
W central; Jurassic, Late, to Early Cretaceous; magnetic field, anomaly lineations ... 6372
plate thickness implications; lithospheric plates, structure ... 6441
W; phytoplankton, size distributions ... 6462

Ostracoda; vent fauna 6500
Pacific Plate
Japan, beneath; Philippine Plate; plate motions, relative, and geometry 3633
pack ice (More at ICE ...)
Arctic area; LF vibrational motion 5086
modelling; cavitating fluids, as 5715
Pagurus
spp. as ancestors of king crabs; Decapoda; crabs, evolution . 4280
paleoceanography
Pacific, E tropical, and the East Pacific Barrier; fossil record; biogeography 3584
Tethys; paleogeography 3678
implications; Cretaceous, upper; Foraminifera, abyssal agglutinated 4116
Pleistocene, Mid- and Late; Indian Ocean, equatorial 6355
Quaternary, Late; Weddell Sea, S margin; glaciology 6359
Paleocene
North Sea; goldmanite, detrital; sediments 5284
and Eocene; South Atlantic; Southern Ocean; clay minerals; kaolinite, distributions, implications 5339
Eocene, earliest; North Atlantic, Biscay Gulf, paleoceanography; sediments, biostratigraphy; fossil record; in French, English abstract 6364
Paleocene-Eocene boundary
Southern Hemisphere; circulation, oceanic and atmospheric, changes 3589
paleocirculation
Atlantic, Nd-Sr isotope evidence; currents, dramatic changes during past 80 myr 5341
paleoclimate (More at CLIMATE ...)
climate change; a geological perspective 3581
and -salinity; estuarine sediments; strontium, isotopics ... 3590
Cretaceous; Milankovitch cycles, rhythms 3598
from ice core records; Holocene; paleoenvironment, from deep ground temperatures; comparison 3608
reconstructions; Pangea 3846
Earth history; stability of the astronomical frequencies 4106
theory paradoxes; report 4372
Phanerozoic; carbon cycle 4691
revealed; sediments, long-chain alkenones; paleotemperature, SSTs 5004
indicators of paleomonsoonal precipitation; Foraminifera, benthic; fossil record 6360
Cenozoic, Late, high resolution studies; Pacific, E equatorial, ODP Leg 138; sediments 6361
paleoenvironment
from deep ground temperatures; Holocene; paleoclimate, from ice core records; comparison 3608
productivity, paleo-, reconstructions 5968
Paleogene
Kamchatka, and Komanorsky islands; paleomagnetism; tectonics 4710
-Neogene; U.S., mid-Atlantic rise; sedimentation, history; turbidites, and contourites 5333
revised; North Sea, Outer Moray Firth; sediments, lithostratigraphy 5336
Foraminifera; extinction; population dynamics 5353
Foraminifera, planktonic; fossil record, survivorship analysis; extinction 5902
paleogeography
Paleozoic, Late; Mesozoic; Asia, SE 3597
processes affecting; Tethys, examples from; tectonics 3634
Tethys; paleoceanography 3678
Pacific, history reviewed 4369
antropogene; Arctic area; seismoacoustic profiling 6320
implications; Messinian, surface; Valencia Trough 6418
paleomagnetic<s> (More at MAGNETICS ...)
paleomagnetic field
rotations; Gibraltar Arc, kinematics; tectonics 5384
paleomagnetism
Pacific; sediments; Japanese expedition results for 76 piston cores 4121
magnetic field, paleointensities 4127
Paleogene; Kamchatka, and Komanorsky islands; tectonics 4710
North Atlantic, Cobb Mountain Subchron; sediments 4712
Olduvai termination; North Pacific; sediments 4715
constraints; geomagnetic field, reversals, geometry 4723
magnetism, rock; geomagnetic field; research in magnetostratigraphy and paleointensity; collection 5357
Jurassic, Middle; North Sea, Brent Group; sediments 5360
global database; rock magnetism 5366
constraints from; Ninetyeast Ridge; India; Asia; plate motions 5388
data; Valencia Trough, margins; crust, structural development 6385
paleotemperature (More at TEMPERATURE ...)
SSTs; sediments, long-chain alkenones; paleoclimate, revealed 5004
Paleozoic
Late; Mesozoic; Asia, SE; paleogeography 3597
Tethys, circum-Mediterranean; rifting, and paleogeography .. 3609
Late, to Early Mesozoic; Pacific, circum-; Japan, SW; Korea, South; tectonics, orogenic belt evolution 5373
palynology
Cretaceous, Lower; North Sea, Scapa Field; sandstones, distribution 3558
Panama Basin
sediment traps, intercomparison experiment 4634
productivity, pulses, Late Quaternary; atmospheric carbon dioxide 4698
marine snow; particle aggregates 6293
Panama: Isthmus of
closure; Pliocene; Costa Rica, Caribbean and Pacific coasts; fossil record, stratigraphy 6378
Pandalus
gurneyi, synonymized with P. danae; Decapoda, pandalid ... 3790
borealis; Decapoda; kriging, in marine ecology; sampling, and mapping; biomass, estimation 4816
Pangea
paleoclimate, reconstructions 3846
margin, divergent; rift zones 4741
Papua New Guinea
Amphipoda, corophioid; Kamaka, taditadi, n.sp. 3787
Gulf of Papua, Fly Delta; sedimentation, effects on; freshwater transport; benthic processes 4996
para-aminobenzoics (Use PAB's)
parabolic wave models
waves 5698
Paramecium
calkinsi, contractile vacuoles; salinity, varying, response to ... 4184
parasitism
invertebrates, consequences to; host evolution 4188
required?; sediments, soft; community structure, odels ... 4190
parks (More at SANCTUARIES ...)
particle aggregates
Panama Basin; marine snow 6293
particle flux
Black Sea; microbiota, production 3758
biosiliceous; Southern Ocean 4022
and scavenging; Southern Ocean, Atlantic sector 4030
role in; Weddell Sea; Scotia Sea; krill; fecal pellets 5813
particulates, settling, rapid coupling between surface and deep waters 6292
particle size
distributions; Europe, W, estuaries; suspended matter 5207
Europe, W, estuaries; suspended matter; flocs, formation and breakup 5208
particles
size; suspended matter; estuaries 3501
large, nongrazable; zooplankton, effects on clearance and swimming behavior 4203
sea salt and mineral, on; nitrates, formation 5777
deep-sea; bioturbation, size-dependent 6021
fecal string settling; krill, diet effects 6045
sedimentation; currents, fields, in 6122
nucleation; aerosols; marine boundary layer 6269
sea-salt; Pacific, tropical; tropospheric aerosols 6270
particles: atmospheric
North Sea, inorganic N, S, and Cl species 5778
particles: ice
hurricanes, Norbert, inner core 5763
particulate matter (See also detritus, marine snow, microparticulates, nepheloid layer, suspended matter; more at SEDIMENTS ...)
particulates
in; Pacific, equatorial; carbon, POC; nitrogen, PON 3502
submicron; North Atlantic, W, shelf water 3503
source, alteration processes; Black Sea; fatty acids, and sterols, as biomarkers 3505
Bransfield Strait; carbohydrates, water-extractable 4013

Weddell Sea, and Scotia Sea; silica, biogenic, distribution; organic matter, POC, composition ... 4027
C and N isotopic variations; Weddell Sea; organic matter ... 4029
chemical, physical properties; Adriatic Sea, N ... 4032
North Carolina, Neuse Estuary; suspended matter ... 4033
micro-; larval settlement; sedimentation; fluorescent label for visualization ... 4181
Sargasso Sea; nitrogen, differences; rings, warm-core, Gulf Stream ... 4628
settling; Pacific; metals, fluxes in pelagic oceans ... 4635
by; light scattering ... 4638
sorption onto; rare earths; seawater, from ... 4809
trajectories around shallow banks; tides ... 5057
mass analysis; North Sea; aerosols ... 5167
characterization; Southern Bight; North Sea; aerosols ... 5169
giant; North Sea; aerosols ... 5170
free radicals in; Seine River, and estuary; manganese, compounds; ESR investigations ... 5206
trace metals; suspended matter; ICES intercomparison exercise ... 5210
biochemistry; India, coast; suspended matter ... 5211
Bivalvia; Crassostrea, gigas; sedimentation, bio-, effects on ... 5539
size distributions; Pacific, tropical marine boundary layer; methanesulfonate ... 5779
Canada, E coast; fecal pellets, copepod; chemical compositions compared ... 5814
large amorphous; suspended matter, sampling; in Japanese, English abstract ... 5815
large, formation; marine snow ... 5817
biogenic; Weddell Sea, -Scotia Sea, during winter; nutrients; productivity; nitrogen, uptake ... 5978
sorption on; suspended matter; zinc ... 6281
settling, rapid coupling between surface and deep waters; particle flux ... 6292
physical characteristics; linear density column for simultaneous measurements ... 6294
distribution, chemistry; Magellan: Strait of; suspended matter ... 6295
biochemistry; India, central E coast; suspended matter ... 6296
Pacific; proteins, occurrence, characterization ... 6297
Arabian Sea; monsoons; water column, effects on ... 6529

particulates: biogenic
rings, warm-core, 82B, and surrounding waters ... 4632

Passamaquoddy Bay
Maine: Gulf of, E; tides, and tidal power simulations; circulation ... 5691

passive margins
Mexico: Gulf of, Texas Gulf; crust, deep structure; basement, Ouachita-Precambrian ... 5943
formation ... 5958

patchiness
chlorophyll; upwelling, caused by ... 3728
dynamics; sediment communities, soft-; demographic aspects ... 4260
and vertical migration; zooplankton; rings, warm-core, 82-H ... 4872
decay; Labrador Current; zooplankton; wind, due to ... 5495
benthos, soft-sediment ... 6017

pattern recognition
biological; neural networks ... 5448

PCBs
Arctic Ocean; pesticides, chlorinated; organochlorines; food webs ... 3802
North Sea ... 4050
possible loss of; eels, European silver, migrating, from ... 4315
organochlorines; toxicities, debatable; report ... 4378
New Bedford Harbor; Massachusetts; sediments; dechlorination, processes ... 5230
microbiota; biodegradation ... 5532
Svalbard, area; seabirds, 2 spp. ... 5569

peat (More at SEDIMENTS ...)

pelagic biogeography ... 4191

pelagic carbonates
mass accumulation rates; productivity, paleo- ... 5883

pelagic ecosystems
stressed; North Sea; plankton ... 3729
nutrients, episodic inputs; atmosphere, from; role in chemical and biological dynamics ... 3950
grazing, role; nutrients, -rich areas ... 5471

pelagic environments
Foraminifera, planktic, diversity as indicator ... 5900

pelagic sediments (More at SEDIMENTS ...)
leaching, chemical; cerium, anomaly, carrier ... 6346

pelletization
role; Japan, Mutsu Bay; sedimentation, processes ... 5280

Penaeidae
Metapenaeus, monoceros; insecticides; toxicities ... 4957

Penaeus
2 spp., attraction to estuarine water in lab; Decapoda ... 6043

penguins
Adelie, mapping rookeries; Antarctica, E; seabirds ... 6026

Penicillus
capitatus; nutrients, limitation; seagrass beds, Bermuda ... 6060

pentachlorophenols (Use PCP's)

peridotites (More at IGNEOUS- ...)
Atlantis II Fracture Zone; basalts; open system melting and spatiotemporal variation ... 6400
abyssal, chemical trends; mantle, refertilization ... 6417

periphyton (More at FLORA ...)

periphyton communities
tin, TBT, and diuron, combined effects; pollution-induced tolerance ... 5577

periphyton: reef
Vietnam, coast; sediment microflora ... 4939

peritidal carbonates
cyclic; ice-house vs greenhouse eustatic controls ... 4670

permafrost (More at ICE ...)

permeability
fluid; accretionary wedges; hydrofracture, conditions for; crust ... 4103

Permian
evidence for Tethys position; Tethys, western; fossil record, circumpacific deep-water faunas ... 3615

Permian-Triassic boundary
mass extinction; catastrophism ... 5010

Persian Gulf
Kuwait, and environs; environmental impact; war, aftermath; remote sensing data sets ... 3830
in the aftermath of the war; pollution ... 4339
fisheries, effects on; war, 1991; preliminary report ... 6110

Peru
margin; sediments, organic-rich; sulfur, geochemistry ... 3553
lithium, sources in pore fluids; slope sediments ... 4643
Pinnipedia; Arctocephalus, australis; seals, South American fur; early mortality causes ... 4877
central, off; coastal upwelling; sediments, Quaternary, proxies ... 5892

Peruvian Upwelling
region; sediments; nitrogen, organic, functionality ... 5224

pesticides
chlorinated; Arctic Ocean; PCBs; organochlorines; food webs ... 3802
organochlorines; pollution; global commons, viewpoint ... 4976

pesticides: organochlorine
intertidal macrofauna; chlordane, effects ... 4955

Petersen grab (More at GRABS ...)

petrogenesis
Aleutian Arc; magma ... 5402

Petroleos Mexicanos (Use PEMEX)

petroleum (See also GAS, OIL, tar; more at HYDROCARBONS ...)
correlations based on branched acyclic alkanes; U.S., Gulf coast ... 3674
missing; organic matter; subduction zones, Franciscan and Cedros complexes ... 4171
origins; Mexico: Gulf of, N ... 4800
occurrences, exploration, retrieval, geology; oil; status of research and methods 1992 ... 5439
detection via TM signature; oil spills; Exxon Valdez ... 5613
Africa, W; report ... 5965
toxicity testing, recommendations; oil, products ... 6073

petroleum biodegradation
oil pollution; bacteria ... 5584

petroleum exploration
Red Sea; Aden: Gulf of; hydrocarbons; methodology of regional cooperation ... 5441

petroleum: hydrothermal
Juan de Fuca Ridge, Middle Valley; sediments; organic matter, alteration ... 6351

petroleum photochemistry
oil, crude, sunlight induced alterations ... 4623

petroleum potential
Sakhalin; sedimentary basins ... 4804
Red Sea; Aden: Gulf of; hydrocarbons, prospects ... 5436
Red Sea; Aden: Gulf of; hydrocarbons; collection ... 5446

petroleum production (More at POWER ...)
petroleum reservoirs
sonics; North Sea, case study; seismology 3526
petroleum resources
global; oil, generation, loss, half-life 4802
petrology
computer software; geochemistry; mineralogy; volcanology; applications 4060
pH (See also alkalinity ...)
changes, measurement from; primary production 4233
Phaeocystis
bloom, on; Netherlands, tidal inlet; Calanoida; Temora, longicornis, grazing pressure 4204
sp. blooms; North Sea, coastal zones; eutrophication 4861
colonies; Dutch Wadden Sea; water column, wintering in? 5460
Phaeodactylum
tricornutum; iron, limitation effects; diatoms; photosynthesis 5566
Phaeophyta
Vancouver; Fucus, distichus; population dynamics 4305
Phanerozoic
World Ocean; strontium, isotope record 4688
carbon cycle; paleoclimate 4691
extinction; impact hypothesis 4708
pharmacognosy (More at DRUGS ...)
phenanthrene
metabolism of; cyanobacteria, Agmenellum quadruplicatum . 4906
phenols
compounds; chemical analysis; determination by HPLC by linear gradients 3468
brominated and nitrated; sediments, estuarine 4652
pheopigments (More at PIGMENTS ...)
pheromones (More at CHEMOTAXIS ...)
Philippine Plate
Japan, beneath; Pacific Plate; plate motions, relative, and geometry 3633
plate boundaries; seismic data 4152
Philippine Sea
submarine lavas; magma, implications of origin 3643
Philippines
central; Neogene; collision tectonics; in French, English abstract 3627
tropical cyclones; new rule of CI number determination in Dvorak technique 3983
July 1990; earthquakes, surface wave amplitudes 4793
Luzon, 1990; earthquakes, source mechanisms 5963
philosophy of science (More at SCIENCE, ACADEMICS ...)
Phoca
hispida, ringed seals; Svalbard, fjords; Pinnipedia; breeding habitat, populations 4244
vitulina richardsi; Alaska, Kodiak; Pinnipedia, harbor seals; organochlorines; chemicals, toxic 5575
phosphates
Arabian Gulf, S; Oman: Gulf of; oxygen 3500
Hudson Estuary, geochemistry and loading history; silicates 4974
phosphoenolpyruvate carboxylase (Use PEPCase)
phosphorites (More at SEDIMENTS ...)
phosphorus
Nile Delta, off; nitrogen 3498
reactive; New Zealand, Otago Peninsula 4018
regeneration, role in; bacterial metabolites 4265
tissue; macroalgae, 5 spp.; nitrogen, tissue; seasonal fluctuations 4932
seawater, analysis; ammonium 5174
exchange; nitrogen, exchange; air-sea interface 5742
dissolved, measurement; natural waters 5789
San Francisco Bay, sources of; nitrogen 5805
Potomac River, Basin; nitrogen; watersheds, balance 5806
limitation; Florida Bay; primary production 6024
nitrogen; watersheds, differential transport through; sewage, -derived N and P 6123
suspended total; seawater, determinations 6290
phosphorus: atmospheric
Mediterranean Sea, NW 5775
photic zone (More at ZONES ...)
photochemical activity
Great Barrier Reef, waters 3487
photochemistry: petroleum
oil, crude, sunlight induced alterations 4623
photodegradation
in seawater; chlorophyll, with phytol ester group; a marker .. 3471
photography: aerial
signal processing; shorelines, detection 4075
photomicroscopy (More at MICROSCOPY ...)
photosynthates
partitioning; phytoplankton; frontal zones, coastal 6457
photosynthesis
characteristics; primary production, controls on; grazing, chief control 3698
light, utilization efficiencies, measurement variability 4229
phytoplankton; turbulence, influences 4827
products; productivity; rings, warm-core, Kuroshio 4839
production during; organic matter; monosaccharides; phytoplankton 4843
North Atlantic, W; nutrients, control by; phytoplankton . 4860
microalgae, response; irradiance, variations 4934
rates; radiation, natural UV, impact; phytoplankton 5475
Bermuda; Dictyotales; macroalgae, deep-water 5564
Phaeodactylum, tricornutum; iron, limitation effects; diatoms 5566
Phyllodocidae
Polychaeta; phylogeny and classification 4914
physiology: diving
health, medical problems associated; review article 3819
phytobenthos (More at BENTHOS ...)
phytoplankton (More at PLANKTON ...)
pigments, chlorophyll, carotenoid; HPLC method for analysis . 3475
release by; nitrogen, determinations 3694
mesoscale heterogeneity; water column, hydrographic variability 3700
chemical composition, elemental composition; Redfield ratio; transformation among; in Spanish, English abstract 3704
micro-; California: Gulf of, autumn; community structure; in Spanish and English 3705
assimilation numbers; California Current, off Ensenada, Mexico; fronts, recurring 3706
population spatial organization; France, Thau Lagoon; coastal lagoons; in French, English abstract 3711
toxins, correlation analysis with species present 3725
and hydrology; Adriatic Sea, NW; brackish basins; in French 3730
population dynamics; South Africa, St. Helena Bay; red tides, blooms 3732
distribution, abundance; Pacific, W tropical; El Niño, ENSO events, effects 4196
Maine: Gulf of, SW; toxic blooms 4202
vernal, heterogeneity, dynamics; Baltic Sea 4208
Weddell Sea, -Scotia Sea, during ice retreat; carbon, cycling; microbiota 4210
iron, limiting?; nutrients 4217
Southern Ocean, South Georgia and Bransfield Strait; nitrogen, assimilation, variations 4222
distribution, production; Kattegat, southern 4225
Antarctica, ice-covered area near Syowa Station; productivity; epontic algae 4228
sample preparation, 2 methods compared; sediment and reverse filtration methods 4230
primary production, evaluation 4231
taxonomy; expert systems 4237
standing crop; Mid-Atlantic Bight, shelf margin 4238
Black Sea; flow cytofluorimetry 4242
cause of lysis in; viruses, widespread occurrence and clonal variation 4268
photosynthesis; turbulence, influences 4827
growth and degradation; carbon; nitrogen 4830
Chesapeake Bay, plume; nutrients, N-, diel variations in uptake 4835
production by; organic matter; amino acids, and fatty acids 4838
organic matter; monosaccharides; photosynthesis, production during 4843
seasonal; Chesapeake Bay, plume, associated with 4855
uptake kinetics; nitrates, supply; rings, warm-core, 82B 4856
North Atlantic, W; nutrients, control by; photosynthesis . 4860
biology; Antarctica, waters around; stratospheric ozone, depletion; radiation, UV 4865
spring bloom, influence of; North Atlantic, E; carbon dioxide; oxygen 4868
productivity, what controls it?; nutrients, high; chlorophyll, low; symposium 5217
cell division rates; iron, enrichment studies 5452
22 spp.; iron, minimum requirements; productivity, implications for biogeochemical control 5456

growth, grazing and sinking rates; Pacific, equatorial; iron, limitation ... 5461
distribution and productivity; tidal fronts, influence; in Korean, English abstract ... 5462
by, in nitrate-rich environments; nitrogen, uptake, diel periodicity ... 5466
growth estimates; grazing, zooplankton, estimates; precision .. 5468
Chesapeake Bay, remote sensing; chlorophyll, determinations ... 5473
radiation, natural UV, impact; photosynthesis, rates ... 5475
Antarctica, waters; iron, effects; productivity ... 5476
ecological dynamics; North Pacific, subarctic; iron, limited; productivity ... 5483
biomass; Southern Ocean; light, limitation; nutrients, macro-, utilization ... 5484
Pacific, central equatorial; productivity, new ... 5488
Prince Edward Islands; zooplankton, meso-, impacts of .. 5489
carbon, inorganic, mechanisms of uptake ... 5492
Foraminifera, planktic; upwelling zones ... 5494
growth, herbivory; North Pacific, subarctic; chemotaxonomic analysis ... 5499
nanno-; Weddell-Scotia Confluence; Cryptophyceae ... 5976
biomass production and fate; Chesapeake Bay; silicates, dissolved, annual cycle ... 5977
variability; Mediterranean Sea, NW; fronts, Catalan, across 5979
assemblages; Indian Ocean; Mauritius, EEZ; pigments .. 5980
fluorescence, excitation and emission spectra measurements .. 5983
New Brunswick, coastal areas; water quality ... 5986
productivity; irradiance, variable, effects; estuaries, shallow . 5989
Baja California, Estero de Punta Banda; productivity, annual variation; in Spanish and English ... 5992
community structure, distribution; Korea, E coast, off ... 5994
community structure variations; Baja California, Puerto Don Juan; in Spanish and English ... 5997
zinc; seawater, feedback mechanisms in ... 6001
size classes; Spain, NW, Galician shelf; upwelling zones ... 6004
species structure; North Pacific, central; gyres, center and edges ... 6005
lake macrophytes; epifauna ... 6058
Copepoda, grazing impact; zooplankton; size structure relationships ... 6449
size and biomass succession patterns; Biscay: Bay of, Cantabrian Sea; water column, stability, effects ... 6450
populations; Magellan: Strait of ... 6451
standing stock, impact on; Tunicata, Pyrosoma atlanticum; grazing; organic matter, carbon, flux ... 6454
frontal zones, coastal; photosynthates, partitioning ... 6457
Chesapeake Bay; nutrients, limitation ... 6458
size distributions; Pacific, W ... 6462
Benguela Upwelling; Namibia, off, autumn 1985 ... 6466

phytoplankton biomass
lagoons, in; wind-induced hydrodynamic control ... 5991

phytoplankton blooms
Arabian Sea, NW, during SW monsoon; interannual variability ... 3693
reconciling aggregation theory with observed vertical fluxes ... 4205
Southern Ocean; controlling factors ... 4227
Antarctica, Breid Bay; organic matter ... 4840
Kattegat, 1988; Chrysochromulina, polylepis ... 4845
Antarctica, early spring; ice, platelet layers, in ... 4864
Sweden, W coast; zooplankton, feeding ecology; grazing .. 6003
India, Hooghly Estuary ... 6453

phytoplankton communities
approach to modelling ... 3731
dynamics; Korea, Cheju Island harbors; in Korean, English abstract ... 4852

phytoplankton growth
rates; diel DNA synthesis cycles ... 4198
rates; methods ... 5985

phytoplankton nutrition
iron; nutrients; possible importance in regions of low biomass 4220

phytoplankton pigments (More at PIGMENTS ...)
remote sensing, ocean color ... 6448

picophytoplankton
Denmark, coastal waters; stratification, summer ... 4866

picoplankton
Chesapeake Bay; carbon, flux ... 4215
nannoplankton; microscopy, epifluorescence, SEM ... 5482
size measurement method; fluorescence microscopy ... 5497

piercement domes (More at DOMES ...)

pigments (See also pheopigments ...)
chlorophyll, carotenoid; phytoplankton; HPLC method for analysis ... 3475
photosynthetic; chromatography, HPLC, determination by .. 3682
photosynthetic, as tracer; sediments; organic matter, macrophyte ... 4307
phytoplankton, nonuniform profile; reflectance, diffuse ... 5094
phycoerythrin fluorescence; Alaska: Gulf of; aphotic zone; chlorophyll ... 5457
plant, analysis; Saduria, entomon, gut analysis; food chains, studies ... 5970
Indian Ocean; Mauritius, EEZ; phytoplankton, assemblages ... 5980

pigments: algal
diversity; Kerguelen Archipelago; sediments, coastal ... 3795

pigments: phytoplankton
remote sensing, ocean color ... 6448

pillow basalts (More at BASALTS ...)

pillow lavas (More at LAVA ...)

pingers (More at OCEANOGRAPHIC APPARATUS ...)

Pinnipedia
Svalbard, fjords; Phoca, hispida, ringed seals; breeding habitat, populations ... 4244
Peru; Arctocephalus, australis; seals, South American fur; early mortality causes ... 4877
Halichoerus, grypus; seals, gray; satellite tracking ... 4879
harbor seals; Alaska, Kodiak; Phoca, vitulina richardsi; organochlorines; chemicals, toxic ... 5575
Mediterranean monk seal; Monachus, monachus; biomonitoring; management, strategies ... 6517

Pioneer Seamount
near; Point Arena, off; shear finestructure, depth dependence; mixing, implications ... 3922

pipeline<s> (More at STRUCTURES ...)

piston coring (More at coring ...)

Pito Rift
Easter microplate; propagating rifts ... 5381
rift zones, propagation mechanisms ... 5383

planetary boundary layer (More at BOUNDARY LAYERS ...)

planetary tectonics
structures; Earth; Mars; Venus ... 6444

planetology (More at GEOLOGY ...)

planets
crust, formation, evolution; tectonics, mostly Earth; colloquium ... 4779

planktivory
dynamics, effects; Baltic Sea, N coast; zooplankton; community structure ... 5493

plankton (See also ichthyo-, macro-, mero-, micro-, microphyto-, microzoo-, nanno-, phyto-, ultra-, and zooplankton; algal blooms, hyponeuston, neuston, primary production, red tides ...)
Indo-Pacific; Suez Canal, through; migration, potential ... 3688
rotifers, microflagellates, bacteria; Chesapeake Bay, Rhode River Estuary in fall; trophic dynamics, coupling ... 3699
Pacific, equatorial; nitrate, utilization ... 3703
Lebanon, waters off; structure and interannual fluctuations; in French, English abstract ... 3715
meso-; Baja California, SW; proteins; carbohydrates; in Spanish, English abstract ... 3718
Chesapeake Bay; estuarine ecosystems; nitrogen, N-15, rapid storm-induced changes ... 3720
North Sea; pelagic ecosystems, stressed ... 3729
Southern Ocean, Atlantic sector; organic matter, sinking; stable carbon isotopes ... 4024
models; predation, role ... 4182
Mexico: Gulf of; productivity, and nutrients; rings, warm-core ... 4195
response to environmental change; population dynamics ... 4213
subsurface layers; Brazil, off; Ciliata; Mesodinium, rubrum 4221
communities, effects on; Southern Ocean, Weddell-Scotia seawater; iron; manganese; fertilization, experiments . 5459
respiratory electron transport activity; Weddell-Scotia Sea .. 5981
and other biota, ecology; Weddell Sea; Scotia Sea; marginal ice zone; *Polarstern* study ... 6094
primary production, method ... 6452
distribution; Tasmania, Bathurst Harbor Estuary; water column, seasonal changes ... 6455
Mediterranean Sea, NW; prochlorophytes, cell cycle distribution ... 6465
in enclosures, effects on; nutrients; metals, heavy ... 6509

plankton biomass
Southern Ocean, Indian sector; elements, major; nutrients 6132

plankton blooms
spring; diatoms, loss of ... 4831

spring; Middle Atlantic Bight 5472
plankton communities
Baja California, coastal lagoon; tides, dynamics 4219
interacting growth and loss rates 5480
plankton counters
optical; zooplankton, small 5477
plankton ecology
stochastic geometry, applications 6447
plankton nets (More at NETS ...)
sea ice, sampling in 4863
plankton samplers
pressurized; for use to 7000 m; in Japanese, English abstract ... 4273
plant biomass
Brazil, Paranagua Bay; macrofauna; marshes, salt, interactions in 5517
plants (See also FLORA ...)
Caribbean area; hurricanes, responses to; ecosystems; animals 4192
plasma spectrometry
techniques, applications and trends in the earth sciences 3527
earth science; symposium 3528
plasmids
endogenous; cyanobacteria; salinity-dependent copy number increase 3765
plastic
recycled; wood, chromated-copper-arsenate-treated; toxicities, of construction materials 4325
plastic debris
floating; Biscayne Bay; fouling 4978
plastic pollution
Aleutian Islands; fishing nets, drift and gill; problems and solutions 4340
plastics: drift
pollution hazards; conservation islands 5606
plate boundaries (More at LITHOSPHERE ...)
along, aseismic slip; earthquakes, great thrust; subduction zones, Makran (Iran, Pakistan) 3653
Eurasia-Africa; earthquakes, as record; tectonic stress 4134
Philippine Plate; seismic data 4152
development; Caribbean Plate, morphology, structure; margin, accretionary; tectonics 5374
margin tectonics; transform-convergent boundaries 5390
earthquakes; seismicity 5417
Pacific-North American; Alaska: Gulf of; tectonics 5911
triple junctions (RRR); East Pacific Rise, Pacific-Cocos-Galapagos junction; spreading ridges 5912
Cocos-Pacific; tectonics, kinematic framework 5913
Philippine and Pacific; subduction zones, Kanto, Japan 6380
slip across; Quaternary, Late; New Zealand, South Island, Australian-Pacific plate boundary; fault zones 6382
plate convergence
oblique; crustal deformation, forearc; tectonics; subduction zones 6396
plate margins (More at LITHOSPHERE ...)
plate motions
no net rotation model of current velocities; tectonics 3630
relative, and geometry; Japan, beneath; Philippine Plate; Pacific Plate 3633
Costa Rica, Pacific coast; Cocos Ridge, uplift; tectonics; crustal deformation 4147
geodesy, tracking by; report 4371
geodesy; VLBI sub-mm horizontal position determinations ... 4716
effect on geodetic measurements of; California: Gulf of; seismic slip, variations 5367
tectonics, global; geodesy, from space 5386
Ninetyeast Ridge; India; Asia; paleomagnetism, constraints from 5388
mantle, upper, dragging; deformation, intraplate, implications for; lithosphere, thickness 5921
crust, velocities; VLBI observations 5947
Archean, Early; crust, formation; tectonics 6395
plate tectonics (See also continental drift, Gondwana, SPREADING, subduction, Vine-Matthews hypothesis, Wilson cycle; more at TECTONICS ...)
reconstructions; U.S., SW; Antarctica, E; Australia, and Laurentia, Pacific margins; supercontinents; discussion . 3631
continents, growth; accretionary wedges, role 3635
Gondwana, tectonomagmatic controls on breakup; Antarctica, proto-Pacific margin 3637
mid-ocean ridges; overviews 4379
mountain belts; supercontinents, cycle 5389
Proterozoic, to Mesozoic; Gondwana, E 5391
Madagascar, fragment of Dharwar craton of India 5918
hotspots; mantle; magmatism 6390
convection-driven; models compared 6394
plates: lithospheric
formation; mantle, dynamics; influence of depth-varying rheologies 3638
structure; Pacific, plate thickness implications 6441
platforms (More at STRUCTURES ...)
Platichthys
flesus; Netherlands, 2 estuaries; Mytilus, edulis; pollutants, trends 6082
Pleistocene
Pliocene; Iceland; sediments; lavas; glaciation and climate record 3579
Pre-, modelling; climate, 100-kyr fluctuations 4109
Arctic Ocean; Foraminifera; sediments; fossil record .. 4114
Late, transgression; Mississippi, and Alabama OCS; shelf morphology 4657
lowstands, during; Korea Strait; sediments, deposition 4697
Tertiary; Iceland; faults, structure 4761
sea level, fluctuations 5340
Mid-; Aleutian Arc, Seguam volcanic center; lava, basalt to rhyodacite suite 5400
plankton and pollen records; Labrador Sea; ocean-atmosphere interactions; climate change, responses to . 5879
end, since; Mediterranean Sea, Alboran Basin; primary production, variations 5896
California: Gulf of, N; Mollusca, shells; neotectonics; taphonomy 5898
Late, since; China, S coast; sea level, changes 6331
Mid- and Late; Indian Ocean, equatorial; paleoceanography 6355
end; beryllium, -10, cosmogenic; Last Glacial Maximum, during, increased production 6356
Pliocene
-Pleistocene; Alaska, Nome; sediments, high sea level; aminostratigraphy 3534
Pleistocene; Iceland; sediments; lavas; glaciation and climate record 3579
-Pleistocene; North Sea, central; Foraminifera; sediments, stratigraphy and correlation 3593
Alaska, N; transgression 5318
-Pleistocene; Ontong Java Plateau, Site 586; oxygen, isotope record 5347
to early Pleistocene; Mediterranean Sea; surface temperature; productivity 5889
Costa Rica, Caribbean and Pacific coasts; Panama: Isthmus of, closure; fossil record, stratigraphy 6378
plumes: cloud
Arctic area; fronts, and ice movement, relation to 5743
plumes: hydrothermal
East Pacific Rise 3568
associated with; Endeavour Ridge; scattering layers, deep 3569
Juan de Fuca Ridge; suspended matter, tracking via 4682
plumes: mantle
geoid, anomalies; dynamic topography; convection structures, applications to Earth and Venus 3659
Cretaceous, Mid-; climate warming, major; hotspots 3840
Tasmantid Seamounts; shallow melting and plume contamination 4135
geomagnetic field, reversal frequency 4156
geomagnetic field, reversal frequency; correlation 4157
South America, Parana; Africa, Etendeka; volcanism, basaltic; rifting, mechanics of 4747
superplumes; superchrons; magnetic field; report 5001
tectonics, continental 5387
Cretaceous, Mid-; discussion of superplumes 5420
and entrainment 5422
hotspot volcanism 5936
plumes: odor
aquatic; finestructure, 3-D, spatial information 3809
plumes: river
Niagara River 3889
plumes: tidal
generation; nutrients; productivity 4998
plutonic rocks (More at IGNEOUS, ROCKS ...)
plutonium
oxidation states; Black Sea, SW 3492
distribution; Baltic Sea, ecosystems 4323
accumulation; Homarus, gammarus, by 4961

pockmarks
geological control; Norwegian Channel; sediments; bedforms ... 6341
Point Arena
off; Pioneer Seamount, near; shear finestructure, depth dependence; mixing, implications ... 3922
Polar Front
fronts, oceanic, mesostructure ... 3885
Southern Ocean, Atlantic sector; organic matter, DOC ... 5191
polar ice caps
science flourishes; report ... 3839
polar lows
Denmark ... 4594
Bear Island, region ... 4596
atmospheric pressure, instability lows ... 4597
measurements comparison; remote sensing, satellite and aircraft ... 4598
polar motion
Earth rotation; relationship ... 3620
polar ozone
special issue ... 6262
polar seas
remote sensing ... 3814
nutrients; primary production; Antarctic, Arctic parallels and contrasts ... 4020
Svalbard; Franz Josef Land; ice, tidal, dynamics ... 4477
marine mammals, research ... 4874
polar vortex
North, record contraction in 1989; sunspots; surface temperature, equatorial; Quasi-Biennial Oscillation; relationships ... 4585
polar wander (More at TECTONICS ...)
polar warming
possible; Eocene, Early; methane, as cause ... 5893
polarity
reversals, periodicity; geomagnetic field ... 4125
poles: magnetic
seeking them; history of science ... 3619
policy (More at GOVERNMENT, LAW ...)
U.S.; wetlands ... 3832
and public debate; Antarctic Treaty, 11th Special Consultative Meeting; pollution, concerns; report ... 4346
and law; Cetacea; whaling, commercial; International Whaling Commission, could end ban ... 6137
politics
Antarctica, case in point; science; interaction in international relations ... 6127
politics: conservation
whaling, setting catch limits; International Whaling Commission; science and sentimentality ... 6519
politics: environmental
commonsense and the precautionary principle ... 5615
politics: international
U.S.; Europe; Japan; global commons; groping for new definition of roles ... 6520
politics: pollution
advocacy science ... 6111
pollen (More at FLORA ...)
pollutant degradation
cyclohexanes, utilization; by a marine alcaligenes ... 6080
pollutant transport
coastal zone, model ... 6113
pollutants
bioavailability; organisms, as sensors ... 4183
effects; Nematoda; Monhystera, disjuncta ... 4324
enantiomer separation; herbicides, degradation; microbiota 6079
trends; Netherlands, 2 estuaries; Mytilus, edulis; Platichthys, flesus ... 6082
pollutants: benthic
enrichment; Narragansett Bay, mapping ... 6121
pollutants: organic
hydrophobic; water solubilities ... 5829
Pacific, W, surface waters ... 6312
pollution (See also outfalls, sewage, WASTE ...)
histories, sources of error; sediment cores ... 4048
impact assessment, and remedies ... 4338
Persian Gulf, in the aftermath of the war ... 4339
concerns; Antarctic Treaty, 11th Special Consultative Meeting; policy, and public debate; report ... 4346
Mersey Estuary; organochlorines, volatile, sources and fate 4651
organochlorines; pesticides; global commons, viewpoint 4976
marine, from land-based sources; global commons; toward a global approach ... 4977
U.S., Oil Pollution Act; oil spills; law ... 4985
environmental protection; Mediterranean Sea; international law; Barcelona Convention ... 4987
marine; Marine Pollution Bulletin; editorial ... 4993
coastal sediments; chemical analysis of genotoxic components 5571
North Sea; fish diseases; review ... 5581
oil spills; international law; Malaysian National Oil Spill Contingency Plan ... 5618
flounder muscle as indicator; France, Atlantic coast; metals; organochlorines ... 6071
microbiota, control by, symposium ... 6112
prevention; Antarctica; ships; international law ... 6117
flux estimates, pattern recognition of particulates; Sweden, coast; Baltic Sea; hydrocarbons, PAHs; organochlorines, dioxins, dibenzofurans ... 6309
pollution: anthropogenic
Alexandria, harbor; Egypt ... 4045
pollution bioremediation
oil spills; Exxon Valdez ... 6118
pollution hazards
drift plastics; conservation islands ... 5606
poliution management
and control; Malaysia, Johore Strait ... 3826
pollution: mercury
Japan; Minamata Bay; what we have learned since ... 3822
pollution monitoring
water; solid phase extraction and spectroscopy ... 3522
Nova Scotia, Sable Island; litter, persistent ... 5609
programs; statistical power ... 5611
pollution: oil
Norway, Froan breeding ground; seals, pups, chronic oil-fouling ... 4946
Kuwait, and Arabian coasts; AVHRR monitoring ... 4975
bacteria; petroleum biodegradation ... 5584
Texas, salt marsh; Spartina, alterniflora ... 6083
pollution: plastic
Aleutian Islands; fishing nets, drift and gill; problems and solutions ... 4340
pollution politics
advocacy science ... 6111
poly-B-hydrooxybutyrate (Use PHB)
Polychaeta
communities, relationship to plant covering; Mediterranean Sea, Balearic Islands; littoral zone, medio- and infra- ... 4895
Eunice, genus reviewed ... 4911
Phyllodocidae; phylogeny and classification ... 4914
France, Bay of Seine; Owenia, fusiformis, transport ... 5541
ecotone; Diopatra, ornata, population ecology; drift kelp, role ... 6041
polychlorinated biphenyls (Use PCB's)
polymetallic nodules
Indian Ocean, Central Basin ... 5444
mineralogical evolution; in French, English abstract ... 5967
polynyas
Nares Strait; sea ice ... 3346
formation, maintenance model; Baffin Bay, North Water ... 5718
population dynamics
and trends, factors influencing; coastal zone, sardine-rich ecosystems; vertebrates, abundant ... 3686
plankton, response to environmental change ... 4213
Vancouver; Phaeophyta; Fucus, distichus ... 4305
Paleogene; Foraminifera; extinction ... 5353
entropic effects; growth rate; evolution, changes ... 5587
long-term studies; seabirds ... 6028
pore water (More at WATER ...)
chemistry; marsh soils ... 4071
Porifera
Ligurian Sea, and Tyrrhenian; sponges, distribution, ecology 4892
Porites
spp.; corals, ancient and contemporary; bioerosion, patterns and paleoenvironmental implications ... 3742
porosity
-thickness determinations; Prudhoe Bay; seismology, interpretations ... 3532
changes; sediment diagenesis ... 4666
porous media (More at SEDIMENTS ...)
porpoises
Pacific, E tropical; radionuclides, Pb-210, Cs-137, K-40 ... 3800

bottlenose dolphins, wild, solitary; England, Northumberland coast; diary of activities June 1988 to January 1991 4873
Australia, Moreton Island; Cetacea; Tursiops, truncatus, feeding station 4876
Portugal
SW shelf; Gammaridea; Caprellidea 4289
Tagus Estuary; estuarine communities; trophic dynamics 6481
Posidonia
Mediterranean Sea, W; Foraminifera; seagrass beds; in French, English abstract 6054
positioning
state-of-the-art summary 5908
accurate GPS measurement; offshore structures, floating platform location 6089
charts, navigational; navigation 6106
GPS; navigation, and hydrography 6107
GPS use; Germany, experience 6108
GPS, height determinations; sea level; marginal ice zone .. 6221
positioning: acoustic
system 6092
positioning systems
GPS; crust, motion; fault zones 4762
potassium
seawater, analysis; oscillopolarographic titration; in Chinese, English abstract 5793
potassium, rare-earth elements and phosphorus (Use basalts: KREEP)
potassium-argon dating (More at DATING ...)
Potomac River
Basin; nitrogen; phosphorus; watersheds, balance 5806
power (See also ENERGY, fuel, HYDROCARBONS, INDUSTRY, offshore-, OTEC ...)
power plants
Sweden; zooplankton entrainment 4951
Practical Salinity Scale
measurement standards; hydrographic tables; International Oceanographic Tables; International Equation of State of Seawater; history 4358
prawns (More at SHELLFISH ...)
precautionary principle
statistical power analysis; importance in environmental decision-making 6116
precipitable water
World Ocean, remote sensing over; humidity, surface 3940
precipitation (See also rain ...)
rates; tropics 3448
forecasts, climatologies; tropics; rainfall 4604
mesoscale; relationship between EMEX properties and environmental characteristics 5160
distribution in, 1960-86; tritium, bomb-related 5161
tropical; temperature; salinity; effects on surface layer structure; in Chinese, English abstract 5750
observations; remote sensing, surface, calibrated against 5758
forecasting from satellite data; rainfall, estimation 5759
retrieval from satellite data; signal processing 5760
Pacific; mercury, sources, composition 5784
seawater; dimethylsulfide, dimethylsulfoxide; trace analysis 5792
associated, effects; Pacific, W tropical; atmospheric convection, deep; surface energy budget 6256
precipitation: carbonate
rate; calcite, Sr/Mg ratios 5853
precipitation: equatorial
Pacific, W; rainfall; El Niño 5761
precipitation: limestone
seawater; building materials, innovative; carbon, sink for . 6144
precipitation temperature
sulfide deposits; seafloor; helium/heat ratios 6352
predation
role; plankton, models 4182
effects; macrobenthos, and meiobenthos, in microcosms 4896
land-based, impact; Southern Ocean, archipelago; Prince Edward Islands; zooplankton, and micronekton, vertically migrating 5490
effects; Gastropoda, life histories; Littorina, 2 spp. 6022
competition; resource utilization; coral reef grazers ... 6446
by crown-of-thorns starfish; Great Barrier Reef; Acanthaster, planci, reproduction, recruitment and hydrodynamics; Echinodermata 6491
predator-prey dynamics
intertidal zone, rocky; experimental removal of predatory whelks 3741
shorebirds, migratory, foraging ecology; sediment communities, effects on 4256
corals, soft, sclerites as defenses; fish, as predators 5542
Copepoda, planktonic; predator-induced changes in diel feeding 6044
predators
top, as indicators of ecosystem events; Weddell-Scotia Confluence; marginal ice zone 5974
predators: infaunal
role; community structure, soft-sediment 4246
pressure (More at FLUID DYNAMICS ...)
sensing; abyssal bacteria 4266
pressure: atmospheric
instability lows; polar lows 4597
increases; geomagnetic field, disturbances, during 4717
depiction; cyclones, intense extratropical 5155
pressure: barometric
forcing; sea level, response 3961
pressure: hydrostatic
Euler equations; fluid dynamics 4545
pressure ridge<s> (More at ICE ...)
pressure: sea level
minimum; wind speed, maximum; tropical cyclones 3982
pressure waves (More at WAVES ...)
primary production (See also phytoplankton, PLANKTON; more at PRODUCTION ...)
controls on; photosynthesis, characteristics; grazing, chief control 3698
estimating; Pacific, equatorial 3701
Atlantic, spatial models; geomathematics application 3709
Pacific, equatorial; fluorescence, data, from 3727
nutrients; polar seas; Antarctic, Arctic parallels and contrasts 4020
microphytobenthos; C-14 incubation technique 4179
remote sensing, algorithm testing 4194
water column, critical depth 4223
Barents Sea; food webs 4226
evaluation; phytoplankton 4231
pH, changes, measurement from 4233
Weddell Sea, NW, simple model for 4234
annual; Southern Ocean, export flux 4239
remote sensing, algorith testing; correction 4826
methods comparison 4854
rate regulation; Pacific, equatorial 5453
Korea, Southern Sea 5464
studies; filtration, fractionation problems 5791
variations; Pleistocene, end, since; Mediterranean Sea, Alboran Basin 5896
Sargasso Sea, seasonal estimates 5990
Grand Banks; model for determination 5995
Florida Bay; phosphorus, limitation 6024
method; plankton 6452
patterns; Biscay: Bay of, Cantabrian Sea 6456
primordial atmosphere
evolution; oxygen, content, box models 4110
Prince Edward Islands
zooplankton, meso-, impacts of; phytoplankton 5489
Southern Ocean, archipelago; zooplankton, and micronekton, vertically migrating; predation, land-based, impact 5490
prochlorophytes
Sargasso Sea, biomasses in; bacteria; cyanobacteria; eukaryotes, photosynthetic 5481
cell cycle distribution; Mediterranean Sea, NW; plankton . 6465
production installations
North Sea; offshore oil; benthos, impacts on 5573
production: primary
controls on; photosynthesis, characteristics; grazing, chief control 3698
estimating; Pacific, equatorial 3701
Atlantic, spatial models; geomathematics application 3709
Pacific, equatorial; fluorescence, data, from 3727
nutrients; polar seas; Antarctic, Arctic parallels and contrasts 4020
microphytobenthos; C-14 incubation technique 4179
remote sensing, algorithm testing 4194
water column, critical depth 4223
Barents Sea; food webs 4226
evaluation; phytoplankton 4231
pH, changes, measurement from 4233
Weddell Sea, NW, simple model for 4234
annual; Southern Ocean, export flux 4239
remote sensing, algorith testing; correction 4826
methods comparison 4854

rate regulation; Pacific, equatorial 5453
Korea, Southern Sea 5464
studies; filtration, fractionation problems 5791
variations; Pleistocene, end, since; Mediterranean Sea, Alboran Basin 5896
Sargasso Sea, seasonal estimates 5990
Grand Banks; model for determination 5995
Florida Bay; phosphorus, limitation 6024
method; plankton 6452
patterns; Biscay: Bay of, Cantabrian Sea 6456
productivity
primary, estimation; temperature, effects; remote sensing . 3691
Baja California, Bahia de Los Angeles; chlorophyll; seston; variability causes; in Spanish and English 3695
North Sea; zooplankton biomass 3708
Pacific, equatorial, along 150°W; WEC88 cruise result papers . 3815
and nutrients; Mexico: Gulf of; plankton; rings, warm-core 4195
new production vs. regenerated production concept; Southern Ocean 4206
benthic, importance; nitrogen, DIN fluxes, controlling; sediment-water interface, in hypertrophic systems 4209
ecosystem; Pacific, subarctic; iron, limitation; ecological processes 4218
Antarctica, ice-covered area near Syowa Station; phytoplankton; epontic algae 4228
daily; Pacific; bacterioplankton 4235
pulses, Late Quaternary; Panama Basin; atmospheric carbon dioxide 4698
primary; Brazil, Cabo Frio; upwelling, and downwelling; biomass; responses compared 4836
photosynthesis, products; rings, warm-core, Kuroshio 4839
summer; England, Plymouth coast; Ciliata 4928
tidal plumes, generation; nutrients 4998
nutrients, -rich conditions, open sea; hypotheses 5199
what controls it?; phytoplankton; nutrients, high; chlorophyll, low; symposium 5217
Southern Ocean; iron; fertilization; possible biogeochemical consequences 5220
paleo-; Lau Basin; North Fiji Basin; sedimentation, rates; stable isotope stratigraphy 5348
Southern Ocean; iron, hypothesis; ice ages, during 5454
implications for biogeochemical control; iron, minimum requirements; phytoplankton, 22 spp. 5456
in oceanic waters; trace metals 5458
and biomass; North Pacific, subarctic, effects; metals, Fe, Mn, Cu, Zn enrichments 5465
Pacific, E tropical; upwelling 5469
Antarctica, waters; iron, effects; phytoplankton 5476
North Pacific, subarctic; iron, limited; phytoplankton, ecological dynamics 5483
limits on; trace metals; seawater, low concentrations in 5485
controls on; Southern Ocean; irradiance, -mixing regime; chlorophyll, maximum 5486
new; Pacific, central equatorial; phytoplankton 5488
paleo-; pelagic carbonates, mass accumulation rates 5883
glacial to postglacial changes; Pacific, W equatorial; Foraminifera, benthic; opal, biogenic 5886
Pliocene, to early Pleistocene; Mediterranean Sea; surface temperature 5889
Quaternary; Pacific, equatorial, changes inferred from temperature record; upwelling 5890
paleo-, reconstructions; paleoenvironments 5968
Weddell Sea, -Scotia Sea, during winter; particulates, biogenic; nutrients; nitrogen, uptake 5978
annual variation; Baja California, Estero de Punta Banda; phytoplankton; in Spanish and English 5992
bacteria; sediments, and water from saltmarsh lagoon 6489
professions: science
annual report of economic status 5620
profilers (More at OCEANOGRAPHIC APPARATUS ...)
profilers: current
ADCP; scattering layers, sunrise, bias profiles 6152
profiling (More at SEISMOLOGY ...)
propagating rifts
North Atlantic, King's Trough; reactivated pseudo-fault 3628
Pito Rift, Easter microplate 5381
Prorocentrum
micans; light scattering; new method 5721
lima; Canada, Atlantic coast; Dinoflagellata, toxic 6067
prospecting (See also exploration ...)
proteins
Baja California, SW; carbohydrates; plankton, meso-; in Spanish, English abstract 3718
occurrence, characterization; Pacific; particulates 6297
Proterozoic
latest, stratigraphy and Earth history; tectonics, and other changes 5332
to Mesozoic; Gondwana, E; plate tectonics 5391
proto-Atlantic (More at Atlantic ...)
Protozoa
and metazoans, interactions; benthos; community structure, implications for 4252
role in regulation; bacteria, enteric; seawater 4904
ciliated; Mediterranean Sea; interstitial communities ... 5554
numbers, biomass; Blake Outer Ridge; sediment communities 6502
Prudhoe Bay
seismology, interpretations; porosity, -thickness determinations 3532
Prymnesium
parvum; Norway; toxic blooms 4825
psammon (More at interstitial fauna ...)
Pseudodiaptomus
n.sp.; India, Gulf of Kutch salt pans; Calanoida 5548
Pterocorythidae
origin, evolution; Cenozoic; Radiolaria 5903
pteropod ooze
North Atlantic, E, episodic preservation in 5279
Pteropoda
North Atlantic, Late Quaternary; climate; sediments, preservation in 3616
public administration (More at GOVERNMENT...)
public media (More at COMMUNICATIONS ...)
pumice
and ash layers, composition and origin; Lau Basin; North Fiji Basin; sediments 5305
pump samplers (More at SAMPLERS ...)
pycnocline
shoaling; evaporation, reduction, due to; sapropels, formation 4699
Pycnogonida
2 spp., biology and feeding behavior; California, S 4279
ammotheid; California, off San Nicolas Island; Ammothella, n.sp. 4281
South Pacific, E; Decapoda 6494
Pyrenees
Western, France; Iberides Mountains, Eastern, Spain; basins, Mesozoic, comparative study 3624
pyrites
sedimentary, oxidation kinetics; seawater 3486
Pytkowicz: Ricardo Marcus
obituary 4995

quartz
extracts; flocculation, processes, implications for; grain size, distributions; feldspar, extracts 3542
solubility; hydrothermal fluids 3570
Al and Ti centers; Japan; dating, ESR, and thermal behavior 4057
Quasi-Biennial Oscillation
tropical stratosphere 3440
El Niño; ocean-atmosphere interactions 4567
polar vortex, North, record contraction in 1989; sunspots; surface temperature, equatorial; relationships 4585
surface temperature; rainfall, over southern Africa; solar cycles 5142
Southern Oscillation; atmosphere, relations 5156
El Niño; Southern Oscillation; stratospheric ozone, Dobson records 6237
quasihomogeneous layer (More at LAYERS ...)
Quaternary
Late; Indian Ocean; wind, forcing of; monsoon circulation; model results 3576
Norway, Draugen shelf; sediments, stratigraphy 3585
past 150,000 yr; Greenland Ice Sheet; ice cores, O-18 record 3599
succession; North Sea; sediments 3605
Late; sediments; thorium, -230; sea level, reconstruction .. 3606
dating, ESR; sediments, deep-sea, core RC17-177 4058
Late; Egypt, NW Nile Delta; margin sediments; terrigenous-carbonate interface 4076
Foraminifera; submarine canyons, Wilmington, South Wilmington, North Heyes 5319

marine terraces; California; Hawaii; sediments; sea level, history 5334
delta sediments, stacked; architecture, O isotopics 5338
Late; Mediterranean Sea; sapropels, stratigraphy 5343
Pacific, equatorial, changes inferred from temperature record; upwelling; productivity 5890
stratigraphy; U.S., middle Atlantic coastal plain; sea level, history 5894
Late, during; manganese crusts, growth rates; climate, influences 5966
Weddell Sea, NW, South Orkney Plateau margin; sedimentation 6340
Late; Newfoundland, Bonavista Bay; sedimentation; glaciation 6354
Late; Weddell Sea, S margin; paleoceanography; glaciology 6359
Late; New Zealand, South Island, Australian-Pacific plate boundary; plate boundaries, slip across; fault zones .. 6382

Queen Charlotte Sound
and Hecate Strait; Canada, BC; circulation, wind-driven ... 3863

radar
technique for diagnosis; hurricanes, structure 3450
radar altimeters (More at ALTIMETERS ...)
radar altimetry
sea state, bias 5030
radiance
remote sensing, AVHRR IR channels 5127
total, direct measurements; seawater, highly transparent 6224
radiation (See also irradiance, LIGHT ...)
OLR and its diurnal variation; estimation from satellite data ... 3413
OLR and its diurnal variation; estimation from satellite data ... 3414
relationship between outgoing IR and total longwave fluxes; satellite data 3416
Arctic deficit; climate, variability 4556
UV; Antarctica, waters around; stratospheric ozone, depletion; phytoplankton, biology 4865
OLR anomalies; tropics, over 5125
natural UV, impact; photosynthesis, rates; phytoplankton . 5475
radiation: atmospheric
thermal; sea ice, growth 6222
radiation: global
changes; climate 5133
radiation: solar
model; climate, studies 5126
variability; Baltic Sea, over; weather, due to 5736
radiative-convection (More at CONVECTION ...)
radio communications (More at COMMUNICATIONS ...)
radio tagging (More at BIOTELEMETRY, TAGGING ...)
radio waves (More at COMMUNICATIONS, WAVES ...)
radioactive dating (More at DATING ...)
radioactive discharges
Fucus, vesiculosis, as bioindicator; model of accumulation and time-integration 4945
radioactive elements (More at ELEMENTS ...)
radioactive materials (See also fallout, fission products, nuclear waste ...)
radioactive waste (See also nuclear waste; more at WASTE ...)
radioactivity
natural, finestructure; water column, oceanic 4009
U.K., waters around; seawater 5799
radiocarbon (More at CARBON ...)
Baja California, Pacific coast; seawater; biota 3490
radiocarbon dating (More at DATING ...)
Radiolaria
Cenozoic; Pterocorythidae, origin, evolution 5903
fauna from sediments and plankton; Norway, W; fjords 6056
radiolarites (More at SEDIMENTS ...)
radionuclide<s> (More at ELEMENTS ...)
radionuclides
Pb-210, Cs-137, K-40; Pacific, E tropical; porpoises 3800
dispersion; model, calibration 5184
Th, U; Taiwan, NE, off; water column, scavenging in 6298
Rhone River, estuary and delta; Bivalvia; Mytilus, sp., contributions; sediment-water interface, fluxes across . 6506
radiothermal sounding (More at sounding ...)
rafting: ice
recovery after; seagrass beds; fauna 4254

rain (More at precipitation ...)
effects; wave damping 5149
rainbands
North Carolina, off; fronts, coastal 5138
rainfall
record; Southern Hemisphere, 1990-91; climate, seasonal summary 3419
tropics; precipitation, forecasts, climatologies 4604
over southern Africa; surface temperature; solar cycles; Quasi-Biennial Oscillation 5142
Sahelian, variability; wind, surface, data; air-sea interface, worldwide fields 5152
estimation; precipitation, forecasting from satellite data 5759
Pacific, W; equatorial precipitation; El Niño 5761
Sahel; surface temperature; interactions, predictability 6249
rainfall: monsoon
surface temperature 5147
India; surface temperature, Arabian Sea; ocean-atmosphere interactions; associations 6250
rare earths (More at ELEMENTS ...)
dissolved; Black Sea 3480
Black Sea, suboxic zone; redox chemistry 3483
Pacific; manganese nodules 3675
mineralization, secondary; basalts, North Atlantic; karsts, reef carbonate, Tunisia 4687
geochemistry; Hawaiian Archipelago; ferromanganese crusts 4807
particulates, sorption onto; seawater, from 4809
North Pacific; seawater, determinations in 5795
seawater, preconcentration in; trace analysis 6277
Raritan Bay
Hudson Bay; environmental monitoring 5590
Rayleigh waves (More at WAVES ...)
incident; continents, boundaries 4760
recruitment: benthic
manganese crusts, formation; seamounts 6524
recruitment: fisheries
models 5614
recruitment: floral
Baltic Sea; Fucus, ceranoides 5561
recruitment: infaunal
positive or negative cues? 4259
recruitment: larval
Mya arenaria; sediment transport, bedload 4248
Red Sea
Gulf of Aqaba; zooplankton, surface dynamics 3702
Suez: Gulf of; Mediterranean Sea, Levantine Basin; microplankton 3714
Aden: Gulf of; zooplankton; community metabolism . 3724
Mediterranean Sea, E; Thaliacea; in French, English abstract 3767
Euphausiacea, biology, biogeography; in French, English abstract 3775
birth and early history; rift zones; tectonics; crust; symposium papers 4063
Atlantis II Deep; magnetic field, data; hydrothermal and geodynamic interpretation 4122
Africa, East; gravity field 4124
distribution in; heat flow, density 4128
Antarctica, Wilkes Land, comparison to; margin tectonics, passive 4129
rift valleys, axial, and deeps; crust, implications for thinning processes; tectonics 4131
shear-controlled evolution; tectonics, pull-apart model 4132
E margin, N Yemen; Oligocene, to present; magmatism ... 4138
beneath; crust, oceanic 4148
Zabargad Island; gneisses, granulite, Pan African age for; rifting, implications for 4155
Suakin Deep; earthquakes, micro-, activity; tectonics, implications 4159
Saudi Arabia, offshore; geophysical observations 4164
N; crust, structure 4165
-Afar depression; spreading systems; rift zones 4727
Ras Mohammed; community structure; coral reefs 4888
parting of; Suez: Gulf of; Israelites, crossing; an oceanographic explanation 5013
Aden: Gulf of; sedimentation, and evolution 5320
Aden: Gulf of; sediments, bio- and lithostratigraphy 5327
opening; granites, A-type; spreading zones 5415
pull-apart evolution; rift zones; tectonics 5428
Aden: Gulf of; sediments, thermal maturity, source-rock occurrence; hydrocarbons, potential 5435

Aden: Gulf of; petroleum potential; hydrocarbons, prospects ... 5436
hydrocarbons, potential; sediments, tectonostratigraphic framework ... 5440
Aden: Gulf of; hydrocarbons; petroleum exploration; methodology of regional cooperation ... 5441
Aden: Gulf of; petroleum potential; hydrocarbons; collection ... 5446
Copepoda, poecilostomatoid and cyclopoid; community structure ... 5544
Aden: Gulf of; Ethiopian Rift; crust, kinematics and deformation; tectonics, since the Oligocene; in French, English abstract ... 6381
crust, nature; tectonics ... 6434

Red Sea Rift
E and W, contrasting styles; margin tectonics ... 4146
junction with Dead Sea transform; Tiran Island, internal block; tectonics ... 4149
East African Rift; Afro-Arabian Rift, system ... 5445

red tides (More at PLANKTON ...)
toxins, brevetoxins; detection by enzyme immunoassay ... 3684
blooms; South Africa, St. Helena Bay; phytoplankton, population dynamics ... 3732
toxic, effects of meteorological factors; Malaysia, Sabah ... 4871
relation to; Spain, Ria of Vigo; nutrients, fluxes; organic matter, fluxes ... 5491

Redfield ratio
phytoplankton, chemical composition, elemental composition; transformation among; in Spanish, English abstract ... 3704

redox chemistry
Black Sea, suboxic zone; rare earths ... 3483

redox interface
Black Sea; mixing, traced by Chernobyl fallout ... 3386
Black Sea, chemical variability ... 3476
Baltic Sea, central; denitrification ... 3508
Black Sea; manganese, oxidation ... 3515

reef<s> (See also atolls; more at COASTS ...)

reef communities
Thailand: Gulf of, Pattaya Bay; temporal variations ... 3738
sub-rubble; Caribbean area ... 5512
biomass, metabolic rates, feeding; zoantharians, octocorals ... 5515
raided; aqaria, saltwater ... 6124

reef grazers: coral
competition; predation; resource utilization ... 6446

reef periphyton
Vietnam, coast; sediment microflora ... 4939

reef sediments
Mariana Islands, N ... 4662
microbiota; nitrogen, transformations ... 5520

reefs
primary framework, effects on; Caribbean Sea, St. John; hurricanes, Hugo, 1989 ... 4247

reefs: coral
geomorphology; currents, prevailing; larval dispersal ... 4081
effects on; Caribbean Sea, St. John; hurricanes, Hugo, 1989 4253
Leeuwin Current; ecological perspective ... 4362
Red Sea, Ras Mohammed; community structure ... 4888
Caribbean area; tourism, impacts ... 5602
Caribbean Sea, S; storms, features ... 5843
South China Sea; ESR and U-series ages ... 5895

reflectance
diffuse; pigments, phytoplankton, nonuniform profile ... 5094

reflectance: bottom
spectra; estimators ... 3912

reflection profiling (More at PROFILING ...)

reflection: seismic
profiling; correction for water depth variations ... 6317

refraction seismology (More at SEISMOLOGY ...)

refuges (More at ECOLOGY, HABITATS ...)

regolith (More at SEDIMENTS ...)

regression<s> (More at SEA LEVEL ...)

relief (More at FLOOR ...)

remanent magnetism (More at MAGNETISM ...)

remote sensing (See also IMAGERY, spectrometers, altimeters, satellites ...)
SAR observations; Gulf Stream; currents ... 3297
ice; snow; review and status ... 3324
retrieval scheme; Weddell Sea, over; atmospheric temperature ... 3412
temperature, effects; productivity, primary, estimation ... 3691
polar seas ... 3814
images, edge detection algorithm; surface temperature ... 3850
derivation of Hasselmann's nonlinear ocean-synthetic aperture radar transform ... 3854
Mexico: Gulf of; circulation ... 3867
eddies; literature study of recent observations ... 3876
spaceborne SAR, from; sea ice, types ... 3907
AVHRR imagery; Arctic area; marine mammals, research 4177
algorithm testing; primary production ... 4194
overview of SAR Chesapeake Tower experiment ... 4334
temperature measurements; dust, Saharan, effects ... 4381
satellite and aircraft; polar lows, measurements comparison .. 4598
algorith testing; primary production; correction ... 4826
programs; Europe; meteorology and climatology ... 5123
AVHRR IR channels; radiance ... 5127
program achievements; Europe ... 5591
AVHRR images; navigation ... 5592
Europe, achievements ... 5594
programs; Europe, marine environment ... 5597
algorithms compared; surface temperature ... 5635
satellite applications; clouds, regimes, Burger distribution ... 5757
surface, calibrated against; precipitation, observations ... 5758
AVHRR, errors; surface temperature ... 6147
altimetry; sea state, determinations; validation method ... 6148
AVHRR; surface, velocity estimates ... 6149
AVHRR; aerosols, radiative corrections; surface temperature ... 6150
color imagery, interpretation; signal processing ... 6151
temperature dependence of beam scattering; sea ice ... 6223
ocean color; phytoplankton pigments ... 6448

reproduction
Crustacea; eggs, production ... 4927

Reptantia
scyllarid; Taiwan; Scyllarus, formosanus ... 5545
Homarus, americanus, habitat selection and predation; benthic habitats, restrictions ... 6020

research
universities; indirect cost rates ... 4347
and development; U.S., 1993 budget; report ... 4348
U.S., 1993 budget; science; report ... 4349
U.S., 1993 budget; science; selective growth ... 4351
ocean, cooperation in; international institutions; Law of the Sea ... 4361

research: marine
history of oceanography; oceans; proceedings ... 4356

research: scientific
when do anomalies begin? ... 4364

reservoirs: petroleum
sonics; North Sea, case study; seismology ... 3526

resource management (See also demand analysis, evaluation research; more at GOVERNMENT ...)

resource utilization
competition; predation; coral reef grazers ... 6446

resources: energy
global commons; a realistic outlook ... 6126

resources: living
Antarctica; krill, fisheries management ... 4341

resources: petroleum
global; oil, generation, loss, half-life ... 4802

respiration
rates; meiobenthos, bathyal ... 6479

restoration
and conservation; Baltic Sea ... 6128

revetments (More at STRUCTURES ...)

Reykjanes Ridge
Canary Upwelling; seismic noise ... 4813
ridge sedimentation; crust, control by ... 6407

rhegmatism (More at TECTONICS ...)

rhenium
Black Sea; sediments, geochemistry; osmium ... 3491

rheology
effects on seasonal simulations; sea ice ... 3340
high temperature, of enstatite; mantle, creep, implications for . 3660

rheology: lithospheric
oceanic, revised estimate ... 5946

rheology: mantle
geodynamical processes ... 3652
seismographs ... 5629

Rhodophyta
California: Gulf of; Gigartina, pectinata; growth responses, biomass variation ... 6504

Rhone Delta
Lions: Gulf of; selenium, distribution ... 3994
and adjacent areas; mercury ... 4044
hydrocarbons, PAH ... 4648
coastal zone; sediments, grain size distribution, longshore variation; test of the McLaren model ... 5263
Rhone River
suspended matter, surface reactivity; trace elements, sorption; relations ... 4025
Delta; Mediterranean Sea, NW; hydrocarbons, PAHs, biogenic; sediments ... 5859
estuary and delta; Bivalvia; Mytilus, sp., contributions; sediment-water interface, fluxes across; radionuclides 6506
Rhopalophthalmus
constrictus n.sp.; Australia, SW; Mysidacea; Australomysis, reubeni n.sp. ... 5550
ribonucleic acid (Use RNA)
ribulose-1,5-biphosphate carboxylase (Use RUBPCase)
ridge<s> (More at LITHOSPHERE ...)
ridge and runnel topography (More at SEDIMENTARY STRUCTURE ...)
ridge sedimentation
Reykjanes Ridge; crust, control by ... 6407
ridges: mid-ocean
magma chambers ... 3647
hotspots; interactions ... 3669
sulfide deposits, Au-bearing; mineralogy, geochemistry ... 3671
gravity, symmetrical anomalies; spreading centers, velocity variations ... 4120
spreading centers, spreading rate dependence; gravity field, structure ... 4123
Norway-Greenland Basin; fault zones, transform, Malloy 4141
plate tectonics; overviews ... 4379
basalts, submarine glasses; seamounts, Loihi; noble gases . 4749
seismic structure/spreading rate relationship ... 5920
East Pacific Rise, evolution ... 5941
structure ... 5959
magma chambers ... 6134
ridges: sand
tidal; North Sea; stratigraphy ... 6325
ridges: sediment
formation; flow, steady; bedforms ... 4668
ridges: spreading
rate; gravity, roughness ... 4722
Juan de Fuca Ridge; event detection ... 5378
East Pacific Rise, Pacific-Cocos-Galapagos junction; plate boundaries, triple junctions (RRR) ... 5912
rift<s> (More at LITHOSPHERE ...)
rift tectonics
Mediterranean Sea; Valencia Trough, geology and geophysics ... 6318
rift valleys
axial, and deeps; Red Sea; crust, implications for thinning processes; tectonics ... 4131
rift zones
Red Sea, birth and early history; tectonics; crust; symposium papers ... 4063
Africa, East; Rukwa Rift, geology and geophysics ... 4696
Red Sea, -Afar depression; spreading systems ... 4727
Pangea; margin, divergent ... 4741
volcanic, in; faulting, dyke-induced; subsidence, graben ... 4789
propagation mechanisms; Pito Rift ... 5383
Red Sea, pull-apart evolution; tectonics ... 5428
extinct axis; Labrador Sea; crust, structure ... 5430
Afar, 1989 sequence; earthquakes; tectonics, implications . 6386
rifting
and seafloor spreading, during; Barents Sea, W; sedimentary wedges, Cenozoic, evolution ... 3601
and paleogeography; Paleozoic; Tethys, circum-Mediterranean ... 3609
West Antarctic Rift, System; Ross Sea, area ... 3623
Tethys; margin, processes ... 3636
implications for; Red Sea; Zabargad Island; gneisses, granulite, Pan African age for ... 4155
mechanics of; South America, Parana; Africa, Etendeka; volcanism, basaltic; mantle plumes ... 4747
rifting: continental
Afro-Arabian Rift, System; crust, thinning; seismic refraction data reviewed ... 4163
rifts
Arctic Ocean, W, shelf ... 4794
West Antarctic Rift, system; geophysical investigations 6319
rifts: propagating
North Atlantic, King's Trough; reactivated pseudo-fault 3628
Pito Rift, Easter microplate ... 5381
Riga: Gulf of
zooplankton, changes; eutrophication ... 4846
rigs (More at STRUCTURES ...)
rings (More at CURRENTS ...)
collision with slope; Loop Current; Mexico: Gulf of, W; currents ... 3883
warm-core; Mexico: Gulf of; productivity, and nutrients; plankton ... 4195
warm-core, 82B; Gulf Stream; ring structure, evolution 4409
warm-core; Kuroshio ... 4421
warm-core, 82B, origin of waters; Gulf Steam, meanders 4424
warm-core; water masses, transport ... 4427
warm-core, 86B; eddies, structure, water types ... 4430
warm-core, 86B and Kuroshio ring compared; currents, hydrography ... 4431
genesis; heat transport, related; eddies ... 4528
warm-core, 82B, decay; circulation, meridional; mixing 4530
structure; eddies, model ... 4531
warm-core, Gulf Stream; Sargasso Sea; particulates; nitrogen, differences ... 4628
warm-core, 82B, and surrounding waters; biogenic particulates ... 4632
warm-core; Kuroshio; organic matter, particulate; N and C isotopics ... 4636
warm-core, Kuroshio; productivity; photosynthesis, products ... 4839
warm-core, 82B; nitrates, supply; phytoplankton, uptake kinetics ... 4856
warm-core, 86A; Gulf Stream; nitrogen, particulate; zooplankton; N-15 abundance ... 4857
82B; Silicoflagellata, distribution; water masses, tracers ... 4867
warm-core; Kuroshio; Salpidae, distribution, growth 4870
warm-core, 82-H; patchiness, and vertical migration; zooplankton ... 4872
warm-core, 82-H; Gulf Stream; fish, distribution, composition 4875
warm-core, Kuroshio; Chaetognatha, distribution 4916
warm-core; Gulf Stream; Kuroshio; eddies; workshop collection ... 4968
warm-core, and streamers; Japan, waters around; role in fishing ground formation ... 4999
statistical study; circulation, models ... 6161
shedding; Agulhas Current, system; currents ... 6181
Gulf Stream; vorticity, barotropic, merging ... 6232
Rio de la Plata
Estuary; Argentina; tides; storm surges ... 3306
ripples (More at SEDIMENTARY STRUCTURES ...)
parameters; waves ... 5068
wind-generated; films, suppression by ... 5078
risk assessment
fisheries management; sources of uncertainty ... 4980
river channels
paleo-; Namibia, S, off; coast, parallel to ... 5837
river impoundments
effects; Zostera, capensis; seagrasses ... 5560
River Murray
Mouth; Australia, South; dynamic aspects ... 4079
river plumes
Niagara River ... 3889
river transport
suspended matter; coastal zone ... 5811
rivers
tides; stage-discharge relationship ... 5694
rock magnetism
paleomagnetism, global database ... 5366
Rockall Plateau
North Atlantic; Dinoflagellata, cyst, biostratigraphy; fossil record ... 4705
Rockall Trough
Ireland, offshore; crust ... 4158
rocks
popping; Mid-Atlantic Ridge; composition of gas trapped in vesicles ... 4136
granitic, generation; Alaska: Gulf of; accretionary prisms, melting in ... 5939
rocks: volcanic
Japan: Sea of, DUPAL anomaly; Pb, Nd, and Sr isotopic variations ... 3666

effusive; Kurile Arc; isotope geochemistry 4788
Lau Basin; geochemistry 5392
glasses; Lau Basin; composition 5394
petrology; Lau Basin 5396
origin, alteration; Lau Basin; North Fiji Basin 5406
Ce and Nd isotopics; Bonin Arc; Solomon Islands; mantle, sources 5935
rockslides
massive, submarine; Mid-Atlantic Ridge, rift valley wall ... 4087
rocky shores
community structure 5973
roll cell convection (More at CONVECTION ...)
Romanche Fracture Zone
Atlantic; ferromanganese crusts, growth rate 4810
rope (See also CABLES ...)
Ross Ice Shelf
ice flows, relict stripes 3325
Ross Sea
area; West Antarctic Rift, System; rifting 3623
silica, biogenic, cycling; water column, upper 4040
Ostracoda, planktonic; Halocyprididae 4917
silicon, role; nutrients, limitation; diatoms 5487
Terra Nova Bay; Antarctica; organochlorines, PCBs, DDTs, HCB; fish 6505
Rossby waves (More at WAVES ...)
reflection; exchange of fluid masses 3400
solution of the Laplace tidal equations 3899
topographic; localization 4452
El Niño, 1935-46 4569
Atlantic, equatorial; tropics, ocean dynamics; W boundary scattering 5746
Rossiinae
Australia; Cephalopoda, sepiolid; taxonomic review 4881
rotation: Earth
polar motion; relationship 3620
tidal friction; history of science 4352
tides, slowing effect 4440
rubidium
Ganga-Brahmaputra River, system; Bengal: Bay of, fluxes to; strontium, isotopes; weathering, Himalayan . 5794
Rukwa Rift
geology and geophysics; Africa, East; rift zones 4696
runoff
sea level, effects; groundwater, discharge to coastal ecosystems 4059
run-up
prediction; waves; beaches 4461
modelling; tsunamis; bathymetry, relevance 5703
extreme values estimation; beaches 6098
waves, setup; beaches 6202
Russia
off Primorskij, 1990; earthquakes 5954
Ryukyu Islands
benthic algae; catalog of genera and species 4309
E of; East China Sea; currents; Kuroshio 5677

Saduria
entomon, gut analysis; pigments, plant, analysis; food chains, studies 5970
Sagami Bay
Japan, off Tohoku and Hokkaido; sediments, forearc 4656
Japan; Copepoda, poecilostomatoid; Hyphalion, sagamiense n.sp. 5552
Suruga Bay; internal tides; currents 6214
Saint John
records; Fundy: Bay of; tides, possibility of rapid changes .. 4436
Saint Lawrence Estuary
ice, shore, as cause; mud flats, ring structures 5272
eddies, wind-induce motion 6168
Saint Lawrence: Gulf of
outflow; Nova Scotia, shelf communities; zooplankton, effects on 5996
Sakhalin
petroleum potential; sedimentary basins 4804
S; accretionary wedges; crust, oceanic fragments and terrigenous trench fill 5288

saline intrusions
over; Canada, Fraser River Estuary; sediment transport .. 6329
saline lenses
Mediterranean Sea, from 5107
salinity (See also chlorinity, conductivity; more at SALT, SEAWATER ...)
Canary Islands, waters around; temperature; nutrients, and chemistry; in Spanish, English abstract 3266
and density; Black Sea; ventilation; temperature 3269
influence; flocs, density, strength 3536
Southern Ocean, Ross Sea sector; temperature; flow, geostrophic; vertical distributions 3857
determination; surface, microlayer 4008
varying, response to; Paramecium, calkinsi, contractile vacuoles 4184
Newfoundland, shelf; temperature 5020
seawater; density; in English and French 5183
Japan Sea; Younger Dryas, NW Pacific; sea level; relationships 5329
precipitation, tropical; temperature; effects on surface layer structure; in Chinese, English abstract 5750
field, evolution; Arabian Sea, E central; Bengal: Bay of, N; during summer monsoon 5798
and adult extract, interactive effects; Balanus, improvisus; larval settlement 6040
South Pacific; temperature 6238
salinity: global
patterns 6283
salinity tolerance
mechanisms; Atlantic; Chesapeake Bay; Bivalvia, oysters, conspecific 6492
Salpidae
distribution, growth; Kuroshio; rings, warm-core 4870
salt (See also halite, SALINITY, sodium chloride ...)
salt balance
tides, and discharge events, during; tropical estuaries 6163
salt fingering
in gravity gradient; convection, diffusive, onset 3388
evolution; convection, diffusive, onset; thermocline 3396
salt flux
evaporation 3397
salt marsh<es> (More at MARSHES ...)
salt marshes
humic matter, makeup 5188
fluxes; upwelling, influence; nutrients, water column concentrations 5810
ecology; New England 6139
development; North Carolina, Topsail Sound 6326
salt structures (More at LITHOSPHERE ...)
Mexico: Gulf of; sediments, seismic imaging 4653
sample preparation
techniques; Wadden Sea, German; sediments; chemical analysis, multielement determinations 3550
2 methods compared; phytoplankton; sediment and reverse filtration methods 4230
samplers (See also grabs, nets, splitters; more at OCEANOGRAPHIC APPARATUS ...)
samplers: plankton
pressurized; for use to 7000 m; in Japanese, English abstract ... 4273
samplers: water
estuarine; trace metals 3466
large-volume; instrumentation, automatic 4848
sampling (See also coring, dredging, drilling ...)
pitfalls; statistical analysis; bias 3810
biological; apparatus, oceanographic; instrumentation; catalog of collection in Monaco Oceanographic Museum; in French, English abstract 4353
and mapping; Decapoda; Pandalus, borealis; kriging, in marine ecology; biomass, estimation 4816
San Andreas Fault
earthquakes, great, and slip rate; faults 4784
system; fault zones, slip rate, strength variations 5426
California; Cajon Pass, borehole results 5447
faults, evolution 5956
San Francisco Bay
Estuary; trace elements 4046
sediments; oil, chemical biomarkers to track spills 4649
Bivalvia, the Asian clam; hydrocarbons; bioaccumulation 4954
sources of; nitrogen; phosphorus 5805
sanctuaries (See also parks ...)
sand<s> (See also dunes; more at SEDIMENTS ...)

sand banks
subtidal, evolution; Australia, W; Moreton Bay; bedforms 5258
sand beaches
ecology; macrofauna, swash features role 5511
sand dollars
dendrasterid; North Pacific, NE; Asteroidea; biogeography, of origin and radiation; fossil record 3614
sand ridges
tidal; North Sea; stratigraphy 6325
sand transport
Bristol Channel; bedload, mutually evasive transport pathways 3539
Bristol Channel; bedload, parting model 3543
sand waves (More at WAVES ...)
sandstones
distribution; Cretaceous, Lower; North Sea, Scapa Field; palynology 3558
Santa Barbara Basin
El Niño, 20th century events; sediments, laminated 5330
Foraminifera, benthic, fluctuations; anoxia 5556
sapropels (More at SEDIMENTS ...)
Aegean Sea; sediments 4678
formation; pycnocline, shoaling; evaporation, reduction, due to 4699
role of productivity in formation; Mediterranean Sea, E; Bannock Basin; organic matter, C accumulation 5274
stratigraphy; Quaternary, Late; Mediterranean Sea 5343
Sargasso Sea
surface temperature; eddies, baroclinic; westward-propagating anomalies 3275
particulates; nitrogen, differences; rings, warm-core, Gulf Stream 4628
biomasses in; bacteria; cyanobacteria; prochlorophytes; eukaryotes, photosynthetic 5481
seasonal estimates; primary production 5990
North Pacific, central; organic matter, DOC; carbon, C-14 activity 6299
satellite altimetry
equilibrium wave spectrum and sea state bias 3310
collinear pass data analyzed 3855
satellite clocks
GOES; accuracy 5593
satellite data
NOAA-AVHRR; signal processing, real time, efficient algorithm 4330
satellite imagery (More at IMAGERY ...)
satellite orbits
Molniya; conference summary 4966
satellites
altimetry data; surface, global mean sea 5027
noise spectrum; Arabian Sea; seamounts, detection 5241
Argos; performance 6091
saturation diving (More at DIVING ...)
Saudi Arabia
offshore; Red Sea; geophysical observations 4164
Savannah River
Estuary; U.S.; sediments, origin 4098
Scandinavia
Foraminiferida; Globopelorhiza, sublittoralis n.gen., n.sp. . 4301
scanning electron microscopes, microscopy (Use SEM)
scattering: acoustic
reflection loss from solid boundaries 3376
surface, wind-driven, from 4499
by infinite hollow cylindrical shell 4512
ray synthesis of leaky Lamb wave contributions 4521
scintillation index 5104
scattering layer<s> (More at LAYERS, OCEAN, SOUND ...)
scattering layers
deep; Endeavour Ridge; hydrothermal plumes, associated with 3569
zooplankton 5463
sunrise, bias profiles; current profilers, ADCP 6152
scattering: light
microbiota 3764
functions 4486
coefficient; profile determinations 4488
particulates, by 4638
Prorocentrum, micans; new method 5721
bacteria, heterotrophic 6490
scattering media
complex; optical characteristics, calculating; reference points 4967
scattering: sound
zooplankton, by 3726
scattering: wave
underwater obstacles 4446
scatterometer data
impact; storm forecasting, QE II storm development; numerical weather prediction 3464
scatterometry
satellite, from; Southern Hemisphere; weather, synoptic .. 3410
science (See also the various scientific disciplines; more at ACADEMICS, RESEARCH ...)
U.S., 1993 budget; research; report 4349
U.S., 1993 budget; research; selective growth 4351
women; tenure; careers 4989
careers; women; physical oceanography 4990
implications, applications; computer modelling 5595
Europe; collection 5619
Antarctica, case in point; politics; interaction in international relations 6127
science: advocacy
pollution politics 6111
science: earth
plasma spectrometry; symposium 3528
science: history of
magnetic poles, seeking them 3619
tidal friction; Earth rotation 4352
Brussels, 1853; the First International Conference on Oceanography 4354
Arctic area, explorations; Nansen: Fridtjof 4359
science: lunar
Moon; 20 years after Apollo; commemorative section 3848
science professions
annual report of economic status 5620
Scientific Committee on Problems of the Environment (Use SCOPE)
Scientific Committee on Oceanic Research
creation and first years 4360
scientific research
when do anomalies begin? 4364
Scleractinia
North Atlantic, Faroe shelf; Lophelia, pertusa; corals, bank-forming, deepwater; fauna, associated 6473
sclerochronology (More at GEOCHRONOLOGY ...)
Scotia Sea
Weddell Sea; Antarctica, Weddell-Scotia Confluence; metals, Cd, Cu, Fe 3995
Weddell Sea; biogenic silica 4224
Weddell Sea; krill; fecal pellets; particle flux, role in ... 5813
Weddell Sea; marginal ice zone; plankton, and other biota, ecology; *Polarstern* study 6094
Weddell Sea; zooplankton, proto-, abundance and feeding ecology; marginal ice zone 6460
Scotian Shelf
North Atlantic, W; mercury, reactive 5177
circulation, subtidal response; currents 5661
circulation, subtidal response to forcing 5662
Scotland
Forth Estuary; organochlorines, HCB, TCB, chloroform .. 5827
Scott spectra (More at WAVE DYNAMICS ...)
scours: ice
and pits; Newfoundland, Grand Banks 4658
scours: intertidal
mesoscale; Bengal: Bay of, Indian coast 4074
Scyllarus
formosanus; Taiwan; Reptantia, scyllarid 5545
Scyphomedusae
Linuche, unguiculata; novel form of clustering behavior 4851
sea breeze<s> (More at BREEZES ...)
sea breeze fronts
India, Thumba coast 5755
sea breezes
and land; air quality, modelling 5754
Dutch Wadden Sea 6258
sea ice (More at ICE ...)
model; atmospheric circulation, GCM; physical basis for coupling models 3323
distribution; Greenland Sea; Barents Sea 3328
image analysis of thin sections 3329
deformation, fields, characteristic propagation in 3330
ridging extent 3331

dynamics; Weddell Sea, winter 3334
beneath; eddies, formation, evolution 3339
rheology, effects on seasonal simulations 3340
floe aggregate; Antarctica; rheology and movement 3341
Ward Hunt Ice Shelf, ancient strata, structure 3342
Nares Strait; polynyas 3346
texture; Weddell Sea, major mechanisms of ice growth 3347
effects of weather on satellite retrieval of concentrations, types . 3348
Arctic Ocean, W; autumn distributions 3350
Chukchi Sea; mechanical energy balance 3354
Arctic Ocean; seasonal model simulations 3355
over; energy flux, density estimation 3362
Arctic area; pack ice stresses and strains 3363
annual field reversal; Beaufort Sea; atmosphere, mechanisms responsible 3432
thin, over; ocean-atmosphere interactions; energy exchanges 3437
Weddell Sea, winter; nutrients, status 3497
Svalbard, near; macrofauna, sympagic 3717
Arctic area; Copepoda, exploitation by 3779
zone; Antarctica; biota 3905
types; remote sensing, spaceborne SAR, from 3907
beneath; waves, attenuation, roll motion 3908
Antarctic Peninsula, S George VI Ice Shelf; stratigraphy, stable isotopes, salinity 3910
over; drag, geostrophic, coefficients 3960
zone; Southern Ocean, between Elephant and South Orkney islands; organic matter, carbon 4014
extent; Antarctica, fluctuations 4479
microwave studies 4480
reflectances; Arctic Ocean; remote sensing 4482
breakup; floes, interactions; sound; noise 4525
sampling in; plankton nets 4863
Antarctic; Dinoflagellata, cysts 4935
beneath; nutrients; chlorophyll; sampler 5085
Southern Ocean, monthly distributions in 5089
Arctic area; morphology statistics 5090
classification 5091
Greenland Sea; Eurasian Basin 5092
atmospheric boundary layer 5093
beneath; turbulent heat flux 5110
leads; remote sensing, image analysis 5714
Northern Hemisphere; forecasting, systems 5719
brines, pockets, and channel structure; cast technique for analysis 5720
role; Southern Ocean; ecosystems, structure 5971
Beaufort Sea; bioluminescence, planktonic 5987
beneath; Weddell Sea; zooplankton; community structure 5999
growth; atmospheric radiation, thermal 6222
remote sensing, temperature dependence of beam scattering . 6223

sea level (See also eustasy, isostasy, regressions, tides, transgressions ...)
South Africa 3303
rise; temperature, relation to 3304
reconstruction; Quaternary, Late; sediments; thorium, -230 3606
and flora, influence; Foraminifera, assemblage zones; marsh communities 3791
rise; South Carolina; coastal zone 3895
response; barometric pressure, forcing 3961
effects; runoff; groundwater, discharge to coastal ecosystems 4059
changes; Argentina, coastal zone; tectonics, neo- 4070
changes; China, Han River Delta; sediments, postglacial stratigraphy 4080
changes, response to; Cretaceous-Tertiary boundary; Dinoflagellata; calcareous nannofossils 4115
Oyashio, long-term variability; currents 4410
as monitor; Pacific; Kelvin waves, equatorial 4435
trends compared; Holocene, Late; U.K.; North Sea 4441
Holocene, 3000 yr of change 4564
Holocene; Tees Esurary; sedimentation, intertidal 4661
histories, global; Wurm-Wisconsin; deglaciation 4701
rise or fall?; climate change, commentary 5008
LF fluctuations; China, Hangzhou Bay 5056
changes, periodicities; Sweden; Stockholm 5060
South Africa, Sundays River Estuary; tides 5061
rise or fall?; climate change 5132
changes, influence; deposition; sediments, carbonaceous ... 5292
Younger Dryas, NW Pacific; salinity, Japan Sea; relationships 5329
history; Quaternary, marine terraces; California; Hawaii; sediments 5334
fluctuations; Pleistocene 5340
LF oscillations; Gibraltar: Strait of; EOF decomposition ... 5697
influence on; Suruga Bay; internal tides 5709
climate change; greenhouse gases, emissions; revised IPCC scenarios 5740
variations; interglacials, age, duration 5887
history; Quaternary, stratigraphy; U.S., middle Atlantic coastal plain 5894
mean; Great Britain, sea slope anomaly; geodesy 5904
fluctuations; South Carolina, shelf; Gulf Stream, relationship 6196
positioning, GPS, height determinations; marginal ice zone 6221
change; China, coast; isostasy, relative to 6328
changes; Pleistocene, Late, since; China, S coast 6331
changes; Indian Ocean, Broken Ridge; carbonate platforms, response; discussion 6365
rise; climate change, ecological consequences; global warming 6525

sea level oscillations
Australia, W, Esperance Harbor 6205

sea level pressure
minimum; wind speed, maximum; tropical cyclones 3982

sea salt
air masses, Alaskan; aerosols, chemical components 3456
spray droplets; measurements 5780

sea state (More at WAVES ...)
stationary; wave height, zero-crossing, and periods 4458
bias; radar altimetry 5030
waves, nonlinearity and phase couplings 5080
determinations; remote sensing, altimetry; validation method 6148

sea surface (More at LAYERS, surface, OCEAN ...)

sea surface temperature (More at SURFACE, TEMPERATURE ...)

sea turtles
Mediterranean loggerhead; Caretta, caretta; clutch size 4878
Kemp's ridley; endangered species 5616
leatherback; Dermochelys; educational 6141

sea use management
and planning; North Sea 3836
and planning; North Sea 3837

seabed
imaging; sonar, synthetic aperture 3372
seismicity, perturbations; electric field, variations 3913
rippled, roughness; shear stress; waves; currents, combined flows 3917
channels, initiation and the problem of landscape scale 4066
roughness; California, shelf; shear stress; storms, during .. 4660
wave-induced stress; liquefaction, momentary 6102

seabed mining
U.K.; Crown Estate; implications for the future 3835

seabirds (More at BIRDS ...)
Weddell Sea; mammals, marine; spring distributions and ecological role 3685
abundance, distribution, breeding patterns; Leeuwin Current, in relation to 4263
concentrations; Canada, Atlantic; metals, heavy; metallothionein 4316
Vancouver Island 4898
spp. abundance changes; South Georgia Island, during rapid SST changes 4899
Iceland, breeding in; Stercorarius, skua 4900
wandering albatross; South Atlantic; Diomedea, exulans, satellite tracking 4901
Mariana Islands; birds; new and unusual records 4902
thermoregulation 4903
feeding; Bering Sea; Amphipoda, stirred by whale activity . 5450
assemblages; Pacific, equatorial; El Niño, and La Niña, effects 5519
2 spp.; Svalbard, area; PCBs 5569
feathers as indicators; North Atlantic; mercury, changes in concentrations 5580
Antarctica, E; penguins, Adelie, mapping rookeries 6026
Southern Ocean, Indian sector 6027
population dynamics, long-term studies 6028
Antarctic Peninsula; Sterna, paradisaea; migration, northbount 6482

seafloor (More at FLOOR ...)
hydrothermalism, activity; new field of research 4102
sounding, vertical dipole array 4489
acoustics, reverberation statistics 4490
acoustic mapping 4496
beneath; Beaufort Sea, icecap, beneath; noise, VLF ambient 4524

electromagnetic sounding 4724
lateral anisotropy; electromagnetic field 4726
gases, volcanic; fumaroles, Papua New Guinea, Matupit Bay; chemistry 4752
North Atlantic, Azores-Gibraltar belt; seismicity 4772
reverberation; acoustics 5103
crust, movement; OBB installation 5905
instrumentation, multisensor, towed 6087
sulfide deposits; precipitation temperature; helium/heat ratios 6352

seafloor boreholes
re-entry technology 5239

seafloor conductivity 4725

seafloor spreading (More at SPREADING ...)
locus; Mariana Trough, S 5377
rate; crust, thickness 5942
rate, dependence; magnetic field, anomalies, anomalous skewness 6374

seagrass<es> (More at FLORA ...)

seagrass beds
ice rafting, recovery after; fauna 4254
and oyster parks; France, Arcachon Bay flats; carbon, sedimentary, quality; benthic respiratory potential 4272
above; Mediterranean Sea; bacterial communities 5535
Mediterranean Sea, W; Posidonia; Foraminifera; in French, English abstract 6054
Bermuda; Penicillus, capitatus; nutrients, limitation 6060
Mississippi Sound; microphytobenthos, sand, productivity 6064
Australia, W; colonization, patterns; epifauna, mobile ... 6469

seagrasses
shoot density; Decapoda, effects on; fish, effects on 4262
Australia, W coast; algae; temperature, sea, effects 4310
Zostera, capensis; river impoundments, effects 5560

seals
fur, pup growth; tagging, effects 3737
monk; Hawaii, last refuge; extinction, in danger of 3843
South American fur; Peru; Pinnipedia; Arctocephalus, australis; early mortality causes 4877
gray; Pinnipedia; Halichoerus, grypus; satellite tracking ... 4879
pups, chronic oil-fouling; Norway, Froan breeding ground; oil pollution 4946

seamounts (More at LITHOSPHERE ...)
effects; flow, oceanic; circulation 3395
emplacement; Mariana Forearc, fluid seeps; tectonics, forearc 4683
Loihi; basalts, submarine glasses; mid-ocean ridges; noble gases 4749
volcanism, role; crust, MAR, construction 4754
Pacific, E tropical; zooplankton, benthopelagic, feeding ecology 4837
over; stratification, conditions; eddies, formation; Taylor caps 5106
detection; Arabian Sea; altimeter data 5237
detection; Arabian Sea; satellites, noise spectrum 5241
bathymetry and distribution; Brazil Basin; Bahia Seamounts 5248
water column over; North Pacific, Horizon Guyot and Magellan Rise; bacterial biomass, and production 5522
Magniagi; Tyrrhenian Sea; magnetic field 6370
Magniagi, Vavilov, Marsili; Tyrrhenian Sea; volcanoes ... 6401
asperities; subduction zones; earthquakes, thrust-type; physical model for rupture 6413
benthic recruitment; manganese crusts, formation 6524

seas: marginal
Mesozoic; North America, W; exotic terranes 4735

seas: polar
remote sensing 3814
nutrients; primary production; Antarctic, Arctic parallels and contrasts 4020
Svalbard; Franz Josef Land; ice, tidal, dynamics 4477
marine mammals, research 4874

seas: shallow
circulation, baroclinic, wind-driven, and tidal; diagnostic model 3277

seas: shelf
numerical modelling, workshop 3272
shallow; Adriatic Sea, Adige River; sedimentation, of riverborne material 5270

seasons
as forcing cycles; water column, internal oceanic variability; circulation 6171

seawater (More at WATER ...)
surfactants, organic; wave damping, and surface pressure, effects 3314
diffuse reflection coefficient; irradiance, attenuation 3367
manganese; trace analysis 3469
coastal and shelf; trace metals; review of measurements, ICES and JMP labs 3477
pyrites, sedimentary, oxidation kinetics 3486
Baja California, Pacific coast; biota; radiocarbon 3490
bacteria; survival of Bacillus licheniformis 3762
single sample; sulfates, and sulfite, determinations 3990
in; chemiluminescence, -flow injection technique; copper, concentration, speciation 3991
artificial; uranyl, dissolved complexed species 4001
behavior in; gadolinium 4003
Tunicata, filtration by; melanin, colloidal 4200
light, field; characteristics 4483
visibility in; light, natural conditions; theory 4485
bubbles, submicron film drop production by 4534
hydrothermal plume; manganese, dissolved, spectrophotometric determinations 4618
determinations in; organic matter, DOC; high-temperature catalytic oxidation method 4620
surface; Atlantic; helium, anomalies 4621
Li cycle; basalts, submarine; lithium, isotopic composition .. 4742
from; rare earths; particulates, sorption onto 4809
Southern Ocean, baseline; hydrocarbons 4818
photoreduction in; iron, (III); spring blooms 4849
Protozoa, role in regulation; bacteria, enteric 4904
boric acid relaxation; sound, absorption; acoustics 5100
analysis; ammonium; phosphorus 5174
tritium, analysis 5176
density; salinity; in English and French 5183
surface; carbonyl sulfide, oceanic source 5187
Amazon River, counterparts, comparison; humic matter .. 5192
organic matter, DOC; analysis methods compared 5195
nucleic acids, dissolved, determination 5197
strontium, isotope variation; climate, influences; 300 kyr record 5321
low concentrations in; productivity, limits on; trace metals . 5485
DOC; carbon cycle, catalytic conversions 5630
Pacific, W; atmospheric aerosols; suspended matter ... 5782
analysis; sulfates; oscillopolarographic titration; in Chinese, English abstract 5790
precipitation; dimethylsulfide, dimethylsulfoxide; trace analysis 5792
analysis; potassium; oscillopolarographic titration; in Chinese, English abstract 5793
determinations in; North Pacific; rare earths 5795
strontium, isotope evolution; tectonics, role 5796
U.K., waters around; radioactivity 5799
urea, determinations, method 5807
Texas, Houston Ship Channel; organic matter; carbon, stable isotopic analysis; sediments 5826
organic composition; invertebrate larvae, energy budgets ... 5972
feedback mechanisms in; zinc; phytoplankton 6001
Foraminifera, growing processes; isotopic fractionation between 6052
Narragansett Bay; coprostanol, geochemistry; sediments 6115
limestone precipitation; building materials, innovative; carbon, sink for 6144
highly transparent; radiance, total, direct measurements 6224
preconcentration in; rare earths; trace analysis 6277
determination in; sulfites; thiosulfates 6278
calcite dissolution 6280
carbon dioxide, partial pressure; fiber optic sensor development 6285
determinations; phosphorus, suspended total 6290
dyes, rhodamine-B detection; new cross-correlation algorithm . 6510
in; sulfur dioxide disposal; proposal, discussion 6515

seawater optics
Raman scattering and internal radiant emission 4487
bio-; irradiance, fluctuations 5496

seawater samples
preserved; bacteria, numbers estimation; effects of storage ... 5534

seaways
structural foundation and evolution; Mesozoic; Europe; Arctic area 3578

seaweed<s> (More at ALGAE ...)

seaweed communities (More at COMMUNITIES ...)

seaweed farming
macroalgae, potential use; carbon dioxide, sink 6303

seaweeds
Mediterranean Sea, checklist; Fucophyceae 6062
Secchi depth (More at LIGHT, OCEAN ...)
Second International BIOMASS Experiment (Use SIBEX)
secondary production (More at PRODUCTION ...)
sediment<s> (See also clay, contourites, debris, deposits, dust, laterites, mud, ooze, PARTICULATE MATTER, peat, phosphorites, porous media, radiolarites, regolith, SANDS, sapropels, soils, turbidites ...)
sediment communities
soft-; indirect effects 4251
effects on; shorebirds, migratory, foraging ecology; predator-prey dynamics 4256
soft-sediment ecology; symposium papers 4257
soft-; patchiness, dynamics; demographic aspects 4260
English Channel; carbon, organic, flows, flux 6014
Blake Outer Ridge; Protozoa, numbers, biomass 6502
sediment cores
pollution, histories, sources of error 4048
smearing of profiles in soft sediments 4093
deconvolution profiles 4677
sediment diagenesis
porosity, changes 4666
North Sea, Fulmar Reservoir sandstones; oil, emplacement effects 6443
early; Okhotsk: Sea of, Paramushir gas hydrate seeps; Bivalvia, Conchocoele community; food chains 6480
sediment failures
Australia, SE slope 4667
tsunamis; Norway, Storegga slides, simulation 5699
in submarine slopes; liquefaction, potential 5848
and fluid flow, seepage force; accretionary wedges; vents, focused venting; channels, headless submarine canyons .. 6350
sediment geotechnical properties
India, Cochin, Mangalore; clays, smectite-rich 5864
sediment irrigation
rates; measurement 5849
sediment microflora
Vietnam, coast; reef periphyton 4939
sediment ridges
formation; flow, steady; bedforms 4668
sediment slurries
dissolved phase; organic metal complexes, Cu, Ni 4002
sediment sound velocity (More at SOUND ...)
sediment spoils (More at SPOILS ...)
sediment structures
biogenic; oxygen flux; sediments, into; in German, English abstract 6300
sediment transport (More at TRANSPORT ...)
fine; tides 3544
bedload; larval recruitment, Mya arenaria 4248
longshore; India, coast 5253
in oscillatory sheet flow 5271
seabed; instrumentation, data logger and platform 5833
longshore; India, coast 6324
Canada, Fraser River Estuary; saline intrusions, over 6329
estuaries; shelf; modelling exchanges 6334
sediment traps
intercomparison experiment; Panama Basin 4634
treatments; microbiota, limiting activity; zooplankton, collection, effects on 6030
sedimentary basins (More at BASINS ...)
development; Cenozoic, Late; Japan, northern Honshu; tectonics; volcanism; relationships 3603
Bering Sea, St. George Basin, evolution and thermal history; hydrocarbons, potential 4169
Sakhalin; petroleum potential 4804
changes; New South Wales, Jervis Bay 5840
Bengal: Bay of, N, super-thick crust 5852
origin; Mediterranean Sea, W; Valencia Trough 6389
sedimentary structure<s> (See also banks, cusps, ripples ...)
sedimentary wedges
Cenozoic, evolution; Barents Sea, W; rifting, and seafloor spreading, during 3601
sedimentation (See also bed-loads, deposition ...)
processes; tidewater glaciers 3322
and climate; North Atlantic, Feni Ridge 3562
terrigenous; North Atlantic, past 10 myr 3565
abyssal; Holocene, Late; Black Sea; climatic and chronological implications 3586
volcaniclastic; Japan, Early Miocene Koura Formation; marginal basins 3592
Cenozoic, early; Norwegian Sea, Hammerfest Basin 3594
oceanic, cycles; elements, associations 3997
particulates, micro-; larval settlement; fluorescent label for visualization 4181
corals, juvenile, effects on; eutrophication 4258
intertidal; Holocene; Tees Esurary; sea level 4661
tectonic and climatic controls; Triassic; North Sea, Beryl Basin 4692
effects on; Papua New Guinea, Gulf of Papua, Fly Delta; freshwater transport; benthic processes 4996
Delaware Bay; marginal basins 5256
Spitsbergen, NW; fjords, seismic architecture 5265
of riverborne material; Adriatic Sea, Adige River; shelf seas, shallow 5270
terrigenous; Australia, NW; Joseph Bonaparte Gulf 5276
processes; Japan, Mutsu Bay; pelletization, role 5280
clay, impact on; North Atlantic; climate, and paleohydrologic changes; in French, English abstract 5290
changing provenance; Devonian, -Carboniferous; U.K., offshore, Clair area 5317
and evolution; Red Sea; Aden: Gulf of 5320
history; Paleogene, -Neogene; U.S., mid-Atlantic rise; turbidites, and contourites 5333
processes; Holocene; Mediterranean Sea, Catalan margin; Foraminifera, assemblages; in French, English abstract . 5344
rates; Lau Basin; North Fiji Basin; productivity, paleo-; stable isotope stratigraphy 5348
fan; Colombia, Caribbean margin; diapirism, mud; faulting, strike-slip 5433
bio-, effects on; Bivalvia; Crassostrea, gigas; particulates . 5539
history; Lake Erie; barrier islands 5841
paraglacial; Newfoundland, St. George's Bay; barrier bars, and platforms 5844
transgressive; Grand Banks, W; Newfoundland; waves; currents 5846
particles; currents, fields, in 6122
rate; India, W, Trombay Bay 6336
rhythmicity; geological record; Earth orbit, forcing by ... 6339
Quaternary; Weddell Sea, NW, South Orkney Plateau margin 6340
Quaternary, Late; Newfoundland, Bonavista Bay; glaciation 6354
history; Tertiary; Valencia Trough; Mediterranean Sea, W; crust, structure 6383
sedimentation: carbonate
cyclic; Florida, W margin, past 5.4 myr 6362
sedimentation: ridge
Reykjanes Ridge; crust, control by 6407
sedimentology: tidal
clastic; symposium papers 6335
sediments
acoustics, measuring attenuation by impedance tube 3373
marine, classification; sonar, chirp 3377
acoustics, converting bottom loss 3379
soft mud; acoustics, evaluation of properties by 3382
beds, over; oscillatory flow; velocities and concentrations ... 3391
evidence from; Southern Ocean; climate, effects on; water masses, North Atlantic Deep Water 3418
geochemistry; Black Sea; osmium; rhenium 3491
organic-rich; nutrients, metabolism as exchange determinant; in Spanish and English. 3496
distribution in; Mediterranean Sea, Egyptian Shelf; organic matter, N, P, C 3499
short core, geochemistry; Egypt; Alexandria 3506
Halifax Harbor, a chronology of contamination; hydrocarbons; metals 3517
Cuba, 5 bays; heavy metals 3518
dating, incomplete mixing model 3524
muds, laboratory testing 3530
mud; coring, quality control 3531
high sea level; Pliocene, -Pleistocene; Alaska, Nome; aminostratigraphy 3534
resuspension rates; Long Island Sound 3538
muddy and sandy; tidal flats; geochemical processes 3545
Black Sea; uranium, geochemistry 3546
muds, rheological boundaries 3547
formation of isoprenoid thiophenes 3548
Wadden Sea, German; chemical analysis, multielement determinations; sample preparation, techniques 3550

composition, origin; Kolbeinsey Ridge 3551
classification; sonar, attenuation modeling 3552
organic-rich; Peru, margin; sulfur, geochemistry 3553
Tyrrhenian Sea; interstitial water, chemistry 3554
surface; California: Gulf of; zinc, distribution; in Spanish and English. 3555
Mexico: Gulf of; compressional waves, speed 3557
muddy; triangle plots and textural nomenclature 3560
muds, need for better characterization 3563
muds, characterization; special issue 3564
influence on radiocarbon ages; carbonate dissolution; dating, carbon 3573
Pliocene; Pleistocene; Iceland; lavas; glaciation and climate record 3579
Jurassic; Africa, NW corner; tectonics, evolution 3580
stratigraphy; Quaternary; Norway, Draugen shelf 3585
from; Atlantic, E equatorial, and equatorial Africa; climate, 220 kyr record 3591
stratigraphy and correlation; Pliocene, -Pleistocene; North Sea, central; Foraminifera 3593
Quaternary, succession; North Sea 3605
Quaternary, Late; thorium, -230; sea level, reconstruction . 3606
preservation in; North Atlantic, Late Quaternary; Pteropoda; climate 3616
thermal state; North Sea; Viking Graben; exploration well data 3622
cyclic di- and trisulfides with linear and acyclic isoprenoid carbon skeletons; identification and geochemical significance 3672
estuarine, bioturbated; nitrogen; oxygen; transformations .. 3752
coastal; Kerguelen Archipelago; algal pigments, diversity 3795
metals, Cd, Ni; toxicities, acute, acid volatile sulfide as predictor 3801
organic matter; fisheries, effects of commercial dragging ... 3808
cohesive; trace metals, mobility; geochemical characterization 3825
oxygen, and sulfide profiles, measurement device 3992
Delaware Estuary; organic matter, terrestrial 4012
Liverpool Bay; arsenic; mercury 4043
deep-sea, core RC17-177; Quaternary; dating, ESR 4058
fine, sources; Severn Estuary; Bristol Channel; England, SW 4068
postglacial stratigraphy; China, Han River Delta; sea level, changes 4080
marsh; Spartina, alterniflora, belowground biomass; diagenesis 4082
low-temperature opal-CT precipitation; Antarctica, around .. 4083
cycling and accumulation in; Antarctica, around; silica, biogenic; organic matter, carbon 4084
pelagic; Indian Ocean; graphite 4089
elements, concentration series 4090
metal-bearing; East Pacific Rise, rates of accumulation on .. 4094
California: Gulf of, Guaymas Basin; clay minerals 4095
origin; Savannah River, Estuary; U.S. 4098
in; Oman, margin; organic matter, preservation 4100
Weddell Sea; organic matter, carbon flux; oxygen, penetration 4101
shocked quartz; Triassic-Jurassic boundary 4107
stratigraphy; Triassic, and Lower and Middle Jurassic; Ireland, SW, off; Fastnet Basin 4112
Pleistocene; Arctic Ocean; Foraminifera; fossil record . 4114
Pacific; paleomagnetism; Japanese expedition results for 76 piston cores 4121
seismic reflection through sea ice; Greenland, NE shelf 4150
seismic data; Aegean Sea; Cretan Trough 4168
surrounding; ferromanganese nodules 4174
light spectra in; irradiance, scalar; instrumentation, fiber-optic microsensors 4180
soft; community structure, odels; parasitism, required? ... 4190
respiration and fluxes, effects on; algal blooms, deposition ... 4249
sedimentary milieu and its consequences; benthic communities 4255
temporarily oxic; Bivalvia, with; bacteria, S-reducing 4267
pigments, photosynthetic, as tracer; organic matter, macrophyte 4307
acoustics, nonlinear 4497
layers, effect; acoustics, HF seafloor reverberations 4515
Bering Sea; nutrients, regeneration; oxygen, demand 4630
methanogenic; acetate, carbon isotope biogeochemistry 4639
anoxic, in; organic matter; mineralization, kinetics 4640
dynamics; carbon, budget; eutrophic ecosystems; sulfur, metabolism, role 4646
Australia, Fly River Delta, Torres Strait; metals, Cu, Pb, Zn . 4647
San Francisco Bay; oil, chemical biomarkers to track spills . 4649
Baltic Sea; contaminants, reviewed 4650
estuarine; phenols, brominated and nitrated 4652
seismic imaging; Mexico: Gulf of; salt structures 4653
forearc; Japan, off Tohoku and Hokkaido; Sagami Bay 4656
Bengal: Bay of; clay minerals 4669
deep-water, elemental composition; Black Sea 4672
monoenes, isolation and characterization 4673
Aegean Sea; sapropels 4678
Southern Ocean; opal, biogenic 4689
deposition; Pleistocene, lowstands, during; Korea Strait ... 4697
isotopic stratigraphy; Miocene, Mid-, deep-sea 4702
North Atlantic, Cobb Mountain Subchron; paleomagnetism 4712
North Pacific; paleomagnetism, Olduvai termination 4715
moisture content; magnetization, influence on 4719
Manokwari Trough; New Guinea Trench; crust 4733
Barents Sea; hydrocarbons, bituminous 4798
biomass; organic matter, residence time; benthos 4894
bioavailability, accumulation, effects in; heavy metals; estuaries, U.K.; review 4943
chemicals, concentration ranges associated with adverse biological effects; toxicities 4952
long-chain alkenones; paleoclimate, revealed; paleotemperature, SSTs 5004
distribution in; hydrocarbons, isoprenoid; alkylbenzenes .. 5198
marine, burial in; carbon dioxide, anthropogenic; commentary 5213
in; oxygen, rapid redistribution; flow, velocity 5214
Peruvian Upwelling, region; nitrogen, organic, functionality 5224
New Bedford Harbor; Massachusetts; dechlorination, processes; PCBs 5230
coastal; North Sea, W; alkylbenzenes, distribution 5233
Turkey, River Goksu and Tasucu Delta; elements, concentrations 5234
deep-sea channel/submarine yazoo system; Labrador Sea, geomorphology; bedforms 5249
budget; Chesapeake Bay 5259
incipient motion; waves; currents 5261
Australia, N; Victoria Delta; bedforms, chenier sequence development 5262
grain size distribution, longshore variation; Rhone Delta; coastal zone; test of the McLaren model 5263
dispersal; Korea, Keum Estuary; channel flow 5267
cohesive; erosion 5268
deposition, and winnowing, importance at shelf scale 5269
Kattegat; carbonate cementation 5275
noncohesive; suspended matter, load calculations 5278
smectite-illite transition; Barbados; accretionary wedges .. 5281
supply; Indian Ocean; neodymium, isotopes, as tracers; circulation, paths 5282
shallow-water, properties; sound, LF propagation 5283
Paleocene; North Sea; goldmanite, detrital 5284
analysis; Fourier transform infrared spectroscopy 5285
deglacial; Canada, Cumberland Sound; thermoluminescence, properties 5286
geochemistry; Clarion-Clipperton Fracture Zone, area; in Korean, English abstract 5287
geochemistry; Lau Basin 5289
carbonaceous; sea level, changes, influence; deposition 5292
Lau Basin, core; thorium, depth profile 5293
geochemistry; North Fiji Basin 5294
record; India, W margin; upwelling 5295
biogenic Si, smectites, plagioclases; Indian Ocean, Kerguelen-Heard Plateau; in French, English abstract 5296
Southern Ocean; silica, biogenic, dissolution quantification . 5297
U.S., mid-Atlantic shelf, slope and rise; silt, fraction, mineralogy 5298
Lau Basin; North Fiji Basin; calcareous ooze, volcanic ash, metalliferous deposits 5300
Indian Ocean, Central Basin; lebensspuren; nodules 5302
classification, Pejrup approach; U.K., Dyfi Estuary 5303
glacial geology; Barents Sea, SW, Bjornoyrenna 5304
Lau Basin; North Fiji Basin; pumice, and ash layers, composition and origin 5305
geochemistry; Lau Basin 5306
heat and fluid flux through; Mid-Atlantic Ridge, North Pond 5308
biofacies development; Miocene; Suez: Gulf of, geology ... 5326
bio- and lithostratigraphy; Red Sea; Aden: Gulf of 5327
laminated; Santa Barbara Basin; El Niño, 20th century events 5330

Quaternary, marine terraces; California; Hawaii; sea level, history ... 5334
Cretaceous-Tertiary boundary; iridium, -rich layer ... 5335
lithostratigraphy; Paleogene, revised; North Sea, Outer Moray Firth ... 5336
Arabian Sea; Foraminifera, planktonic percentage ... 5337
Late Holocene; Walvis Bay, environmental indices; Foraminifera, planktonic ... 5342
Neogene, Late, and Pleistocene; magnetism, rock ... 5359
Jurassic, Middle; North Sea, Brent Group; paleomagnetism ... 5360
trace element and isotopics; Mariana Arc; magma, petrogenesis, implications for ... 5398
thermal maturity, source-rock occurrence; Red Sea; Aden: Gulf of; hydrocarbons, potential ... 5435
tectonostratigraphic framework; Red Sea; hydrocarbons, potential ... 5440
sandy; North Sea, S; macrofauna; trawling, beam-, effects 5504
microbial communities; biomass, structure variations ... 5529
North Sea; lead, bioavailability ... 5572
Australia, W, Rowley Shelf; hydrocarbons; biota, oysters . 5578
metabolism and sulfate reduction; mariculture; fish farming, caged, effects ... 5586
trends; England, NE coast; benthos, trends; waste disposal, sewage sludge ... 5612
halogen compounds ... 5788
Goa, Mandovi Estuary; organic matter, carbon ... 5802
compositions in; amino acids; carbohydrates; lignin ... 5803
methanogenic; carbon, isotope biogeochemistry; erratum ... 5818
Texas, Houston Ship Channel; organic matter; carbon, stable isotopic analysis; seawater ... 5826
India, NW coast; hydrocarbons, petroleum ... 5830
erosion surface; Tertiary; North Sea, Belgian sector ... 5838
multiple sources; Florida, NW; Alabama, SE; longshore drift ... 5845
North Atlantic, Davis Strait; carbonate dissolution ... 5847
organic matter, early diagenesis; carbon, isotopic composition alteration ... 5850
diagenesis of plant triterpenoids; Baffin Bay ... 5851
erosion, resistance, prediction; muds ... 5855
India, Visakhapatnam shelf; clay minerals ... 5856
provenance; Chesapeake Bay; beryllium, -10 ... 5857
seismic reflectors; Vancouver Island; gas hydrates; methane ... 5858
Rhone River, Delta; Mediterranean Sea, NW; hydrocarbons, PAHs, biogenic ... 5859
principal component analysis; Brazil, Ilha Grande Bay; in Portuguese, English abstract ... 5860
elements, depositional chemistry; chert, interoceanic variation 5862
clay-rich; silica, biogenic, effects ... 5866
collapse and flow; Tyrrhenian Sea, E; shelf deposits ... 5867
analysis; China, Pearl River mouth; in Chinese, English abstract ... 5869
hydrothermally altered; Guaymas Basin; beryllium, isotope geochemistry ... 5871
seismic reflectors, fluid expulsion; gas hydrates, methane, formation ... 5873
Quaternary, proxies; Peru, central, off; coastal upwelling .. 5892
fabric; microfossil taphonomy; ooze, pelagic, relationships 5901
coastal; Great Barrier Reef, lagoon; bacteria, profiles 6029
pelagic; microbiota; organic matter, degradation ... 6031
Bengal: Bay of, Madras coast; water column; mycoflora; fungi ... 6034
Bo Hai Sea; Foraminifera; in Chinese, English abstract ... 6053
Mexico, Campeche Bank; hydrocarbons, aliphatic; biota .. 6074
Baltic Sea, bay; metals, heavy, decrease; sewage, treatment . 6109
Narragansett Bay; coprostanol, geochemistry; seawater . 6115
lignin, determinations ... 6287
sandy and silty; North Sea; nitrogen cycle ... 6291
into; sediment structures, biogenic; oxygen flux; in German, English abstract ... 6300
coastal, different types; Denmark; ammonium, pools, variations ... 6302
cohesive, erodability; benthic annular flume for measurements . 6332
and sedimentary processes; Magellan: Strait of; deposition 6337
porosity, fluid flow; accretionary wedges ... 6338
Norwegian Channel; bedforms; pockmarks, geological control ... 6341
fine fraction mineralogy; Magellan: Strait of ... 6344
texture; India, Cochin Harbor ... 6345
thermal history modelling; Georges Bank ... 6347
and rocks, predicting velocities in; seismic shear waves 6348
Juan de Fuca Ridge, Middle Valley; hydrothermal petroleum; organic matter, alteration ... 6351
Cenozoic, Late, high resolution studies; Pacific, E equatorial, ODP Leg 138; paleoclimate ... 6361
carbonate-evaporite relations; Miocene, Late, Messinian events; Mediterranean Sea ... 6363
biostratigraphy; Paleocene; Eocene, earliest; North Atlantic, Biscay Gulf, paleoceanography; fossil record; in French, English abstract ... 6364
banded iron formations; crust, thermal history; europium, anomalies ... 6414
Aegean Sea, Cretan basin; basement, acoustic relief structure 6440
Bivalvia, Abra alba; deposit feeders; interactions ... 6468
and water from saltmarsh lagoon; bacteria; productivity ... 6489
Magellan: Strait of, Project; water column, hydrography; circulation ... 6511

sediments: anaerobic
estuarine; cadmium, partitioning ... 5797

sediments: anoxic
Orca Basin; lipids, *Spartina*, selective alteration ... 5221
Norway, W, Barsnesfjord ... 5863

sediments: atoll
Eniwetok Atoll ... 4663

sediments: carbonate
Australia, S, Lacepede shelf; dolomites, synsedimentary detrital ... 4091
diagenesis ... 4675
facies; Mexico: Gulf of; Arabian Gulf; hydrocarbons, fields ... 4799
climate, oceanographic isotopic signals ... 5277
Tasmania, W; variations with water depth ... 5299

sediments: clay
microstructural classification ... 3559
North Pacific, E; nodules, distribution, geotechnical properties ... 5442
microfabric; California, continental borderland ... 6343

sediments: coastal
pollution; chemical analysis of genotoxic components ... 5571
Dar es Salaam; Tanzania; metals, heavy ... 6308

sediments: cohesive
Chesapeake Bay; erosion, and consolidation ... 3549
model for prediction of settling and consolidation ... 3561

sediments: delta
Mississippi Canyon ... 4676
stacked; Quaternary; architecture, O isotopics ... 5338
Glacier Bay, Queen Inlet; turbidity currents; slope processes, submarine channels ... 6333

sediments: estuarine
strontium, isotopics; paleoclimate, and -salinity ... 3590
bacteria, activity ... 3755
Virginia, James River Estuary, facies model ... 4099

sediments: fan
Mexico: Gulf of; sonar, backscatter variation ... 4674
fold belts; Mexico: Gulf of; Mississippi Fan ... 4679
Mississippi Fan; structural geology, evolution ... 5868

sediments: graben
Miocene; Mediterranean Sea, Sardinia ... 4695

sediments: hydrothermal
microbial ecology ... 6484

sediments: intertidal
bulk properties ... 5266

sediments: margin
and adjacent deep-sea; Cenozoic, geology; Europe, NW 3679
Quaternary, Late; Egypt, NW Nile Delta; terrigenous-carbonate interface ... 4076
Great Bahama Bank ... 4085
loading by; New Zealand, Western Platform; crust, strength implications ... 4097
Cenozoic; Antarctica; record of glacioeustatic and tectonic events ... 4730
Tertiary, Late; Mediterranean Sea, off Israel ... 5865

sediments: metalliferous
Atlantic; atacamite ... 4092
neodymium, scavenging residence time; hydrothermal vents, near ... 5872

sediments: pelagic
leaching, chemical; cerium, anomaly, carrier ... 6346

sediments: reef
Mariana Islands, N ... 4662
microbiota; nitrogen, transformations ... 5520

sediments: shelf
high-latitude; radiochemical approach to geochronologies 5324
India, W, off Gangolli 6342
Cenozoic, spore-pollen assemblages; East China Sea 6367
sediments: slope
Peru; lithium, sources in pore fluids 4643
sediments: suspended
dispersion; North Sea; lead, transport 4051
discharge; Maine: Gulf of, during April 1987 100-yr flood ... 4077
derivative reflectance spectroscopy 4633
Baffin Island, McBeth Fjord 5212
fiber optic sensor 5250
sediment-water interface (More at INTERFACES, FLOOR ...)
beneath; advective transport 3541
in hypertrophic systems; productivity, benthic, importance; nitrogen, DIN fluxes, controlling 4209
Baltic Sea, Puck Bay; chemical flux 5819
Baltic Sea, Puck Bay; oxygen, uptake kinetics 5820
fluxes across; Rhone River, estuary and delta; Bivalvia; Mytilus, sp., contributions; radionuclides 6506
seep communities
Japan, elemental compositions; vent fauna; in Korean, English abstract 6474
seeps: hydrocarbon
Mexico: Gulf of, NW slope 4797
Seine River
and estuary; manganese, compounds; particulates, free radicals in; ESR investigations 5206
seismic anisotropy
core 4757
North Atlantic; mantle 4774
Japan: Sea of, Yamato Basin; crust 6411
seismic discontinuities
520-km; mantle, upper 4145
Hawaii, beneath 4775
subduction zones, thermal structure 5434
seismic gaps
hypothesis; earthquakes, frequency, cyclicity 5627
Hawaii; earthquakes 6439
seismic noise
Canary Upwelling; Reykjanes Ridge 4813
seismic profiles
spread and split-spread; Nankai Trough; crust 4791
sidescan images; signal processing 5243
seismic reflection
profiling; correction for water depth variations 6317
seismic shear waves
sediments, and rocks, predicting velocities in 6348
seismic slip
variations; California: Gulf of; plate motions, effect on geodetic measurements of 5367
seismic surveys
crust; BIRPS data 5624
seismic tomography
diffraction tomography 3525
East Pacific Rise, 12°N; spreading center, imagery 6410
seismic velocity
impact on; crust, evolution 5952
seismic waves (More at WAVES ...)
velocity; Japan: Sea of, Yamato Basin 4144
mantle, upper, attenuation in 4770
seismicity
seismogenic structures activated 1987; Adriatic Sea, coast ... 3654
perturbations; electric field, variations; seabed 3913
characteristics; Mid-Atlantic Ridge; earthquakes, micro- . 4769
micro-; Hellenic Arc 4771
North Atlantic, Azores-Gibraltar belt; seafloor 4772
earthquakes; plate boundaries 5417
shallow; Lesser Antilles, Arc, 1981-88; subduction zones; earthquakes; in French, English abstract 6419
Valencia Trough, and surrounds 6428
tsunamis, genesis; crust, *T*-phase spectra, seismic moments .. 6438
seismographs
mantle rheology 5629
seismology (See also earthquakes, profiling; more at SOUND ...)
North Sea, case study; petroleum reservoirs, sonics 3526
reflections with a bottom velocity transition zone 3529
interpretations; Prudhoe Bay; porosity, -thickness determinations 3532
signal processing; airgun signatures and the minimum-phase assumption 4055
lithosphere, stress, strength, viscosity; crust; symposium 4151
seismoacoustic investigations; airguns, PIIE.03 6315
seismology: exploration
North Sea; hydrocarbons 4172
seismometers (More at OCEANOGRAPHIC APPARATUS ...)
seismotectonics
earthquakes, source mechanisms; crust 4167
selection (More at EVOLUTION ...)
selection: natural
wave forces, on organisms; biota, evolution, body form 4327
selenium
dissolved; North Pacific 3993
distribution; Lions: Gulf of; Rhone Delta 3994
SEM (More at MICROSCOPY ...)
semisubmersible<s> (More at VESSELS ...)
sensors: CTD
bathythermographs, XBT depth error corrections; in Japanese, English abstract 4384
sensors: hydrogen
fuel cell; marine applications 4625
Sergestidae
shrimp assemblages; Mexico: Gulf of; composition, distribution, feeding 5546
Serolis
apheles n.sp., and S. antarctica, range extension; Indian Ocean, SW; Isopoda 5551
seston
Baja California, Bahia de Los Angeles; chlorophyll; productivity; variability causes; in Spanish and English .. 3695
partitioning in; Fundy: Bay of; cadmium; lead 4637
availability, quality; suspension feeders, benthic 5209
Mexico, Lagoon La Cruz, Sonora; nutrients; in Spanish and English 5804
Seto Inland Sea (See also Inland Sea ...)
Seto Marine Biological Laboratory
laboratories; type specimens, zoological, inventory 4969
settlement: larval
Caribbean area; Barbados; corals, scleractinian 3749
particulates, micro-; sedimentation; fluorescent label for visualization 4181
barnacle; bacterial films; inhibition investigated 4891
Ascidiacea, colonial 5509
Balanus, improvisus; salinity, and adult extract, interactive effects 6040
Severn Estuary
Bristol Channel; England, SW; sediment, fine, sources ... 4068
sewage (More at POLLUTION, WASTE ...)
and natural seasonal disturbances, effects; New Zealand, Wellington; benthic macrofauna 4940
influence; estuaries, macrotidal; fatty acids, and sterols 5232
treatment; Baltic Sea, bay; sediments; metals, heavy, decrease 6109
-derived N and P; nitrogen; phosphorus; watersheds, differential transport through 6123
sewage disposal (More at WASTE DISPOSAL ...)
sewage outfalls
near; Arabian Gulf, Dubai Creek; macrobenthos 4950
sewage sludge
waste disposal 3823
shallow seas
circulation, baroclinic, wind-driven, and tidal; diagnostic model 3277
shallow water equations
program for solving in spherical coordinates 4332
Riemann problems and the WAF method of solution; fluid dynamics 4550
influences on degree of balance; fluid dynamics 5121
shallow-water waves (More at WAVES ...)
shards (More at SILICATES ...)
shark attacks
South Africa, coast, 1960-90 5011
shear
instabilities; longshore currents; theory, observations 3916
high-wavenumber; temperature, structure; Patches Experiment 3923
convection; fluid dynamics 4541
shear: current
wave-follower estimates 5018
shear finestructure
depth dependence; Pioneer Seamount, near; Point Arena, off; mixing, implications 3922

shear flow (More at FLOW ...)
on; waves, stationary vortical ... 3307
stratified; internal waves, instability ... 4471
stratified; turbulence, evolution ... 4538
shear instability
waves ... 4460
shear stress
seabed, rippled, roughness; waves; currents, combined flows 3917
California, shelf; seabed, roughness; storms, during ... 4660
geophysical constraints; Marquesas Fracture Zone; fracture zones ... 5414
shear: velocity
vertical, effects; turbulence, dynamics ... 4527
shear waves: seismic
sediments, and rocks, predicting velocities in ... 6348
shelf (See also continental shelf, OCS; more at LITHOSPHERE ...)
water column and hydrophysical properties; Japan: Sea of; internal waves ... 3904
-ocean boundary; currents, slope ... 5039
sediment transport; estuaries; modelling exchanges ... 6334
shelf circulation
long time-scale, density-stratified model ... 3273
response; internal waves ... 5083
shelf deposits
Tyrrhenian Sea, E; sediments, collapse and flow ... 5867
shelf ecosystems
modelling ... 5622
shelf morphology
Pleistocene, Late, transgression; Mississippi, and Alabama OCS ... 4657
shelf seas
numerical modelling, workshop ... 3272
shallow; Adriatic Sea, Adige River; sedimentation, of riverborne material ... 5270
shelf sediments
high-latitude; radiochemical approach to geochronologies ... 5324
India, W, off Gangolli ... 6342
Cenozoic, spore-pollen assemblages; East China Sea ... 6367
shelf-slope water fronts (More at FRONTS ...)
shellfish (See also krill, lobsters, mussels, oysters, prawns, shrimp ...)
shelves: ice
coupling with ocean ... 3332
ship<s> (More at VESSELS ...)
ship wakes
films, surface-active, redistribution ... 5112
ships
Antarctica; pollution, prevention; international law ... 6117
shipwrecks
North Atlantic; Vestimentifera, growing on ... 5625
shorebirds (More at BIRDS ...)
migratory, foraging ecology; sediment communities, effects on; predator-prey dynamics ... 4256
shoreline dynamics (More at COASTS, FLUID DYNAMICS ...)
beach nourishment, artificial; coastal zone, intervention .. 4078
need understanding; South Africa; coastal zone ... 4344
Holocene; Holland; coastal zone, evolution ... 5251
waves, shallow-water, unbroken progressive; sedimentary processes, hydrodynamics ... 5254
coasts, recession and accretion ... 5255
on low drift coasts; tidal inlets ... 5260
Florida, East Pass; inlets, migration ... 5264
beaches, storm/normal profiles ... 5842
coastal zone, response predictions; climate change ... 6327
U.S., politics and policy; CZM; buildings, and federally subsidized insurance ... 6518
shorelines
detection; aerial photography; signal processing ... 4075
Israel; litter ... 5605
shores: rocky
community structure ... 5973
shrimp (More at SHELLFISH ...)
shrimp trawling
effects; South Carolina, sounds; benthic communities ... 5516
Siberia
-Atlantic system; crust, density structure; tectonosphere ... 4795
side looking airborne radar (Use SLAR)
siderophore
production; iron, acquisition; bacteria, Alteromonas luteoviolaceus ... 5530
signal agents (More at CHEMOTAXIS ...)
signal lamps (More at COMMUNICATIONS ...)
signal processing
synthetic aperture; acoustics; collection ... 3385
data assimilation; meteorology; oceanography ... 3812
seismology; airgun signatures and the minimum-phase assumption ... 4055
aerial photography; shorelines, detection ... 4075
real time, efficient algorithm; satellite data, NOAA-AVHRR . 4330
acoustic tomography ... 4522
seismic profiles, sidescan images ... 5243
precipitation, retrieval from satellite data ... 5760
remote sensing; color imagery, interpretation ... 6151
SAR imagery; waves, spectra estimation ... 6201
interference fringes; Bering Sea; sonar, images ... 6313
silica
biogenic, dissolution kinetics; Weddell-Scotia Confluence; aluminum, dissolved, effects ... 4006
biogenic, distribution; Weddell Sea, and Scotia Sea; organic matter, POC, composition; particulates ... 4027
biogenic, cycling; Ross Sea; water column, upper ... 4040
biogenic; Antarctica, around; organic matter, carbon; sediments, cycling and accumulation in ... 4084
double maximum; North Pacific ... 5180
biogenic, dissolution quantification; Southern Ocean; sediments ... 5297
biogenic, effects; sediments, clay-rich ... 5866
biogenic; World Ocean; oxygen, isotopic studies; temperature, changes recorded ... 6366
silica: biogenic
Holocene; Indian Ocean, SE, accumulation rate in ... 4105
Weddell Sea; Scotia Sea ... 4224
Southern Ocean, annual production in ... 4236
silicates (See also shards, tektites, glass ...)
Hudson Estuary, geochemistry and loading history; phosphates ... 4974
dissolved, annual cycle; Chesapeake Bay; phytoplankton, biomass production and fate ... 5977
siliceous sediments (More at SEDIMENTS ...)
Silicoflagellata
distribution; rings, 82B; water masses, tracers ... 4867
silicon
role; Ross Sea; nutrients, limitation; diatoms ... 5487
silt
fraction, mineralogy; U.S., mid-Atlantic shelf, slope and rise; sediments ... 5298
Siphonophora
prayid; Nectopyramidinae, revised ... 4915
Skagerrak
E; Synechococcus, spp., seasonal distribution; cyanobacteria ... 4207
Skeletonema
costatum; tin, butyltins; degradation, and biosorption; diatoms, and associated bacteria ... 4956
skeletons: coral
Antipatharia; architectural, mechanical properties ... 5540
slicks (See also films; more at OIL POLLUTION ...)
formation mechanisms; surface films ... 3429
surfactants, images revealed by; wind, fronts ... 4584
currents; SAR observations ... 5043
second harmonic generation; laser studies ... 5109
surface; California, S; active and passive microwave measurements ... 5527
surface microlayer; films ... 5623
slicks: oil
at sea, acoustic observations ... 5603
films, drift velocity ... 5828
slope currents
fluctuations; Taiwan, NE of ... 6177
slope sediments
Peru; lithium, sources in pore fluids ... 4643
slope water (More at OCEAN, WATER ...)
sludge (More at WASTE ...)
sludge: sewage
waste disposal ... 3823
slump<s> (More at EROSION ...)
Smith-McIntyre grab (More at GRABS ...)
smoke: oil
Kuwait; fires, postwar; atmosphere, effects ... 5783
snow
ice; remote sensing; review and status ... 3324

cover, Eurasian; monsoons, Indian; El Niño, ENSO; relationships, synthesis ... 3956
Society Islands
French Polynesia; volcanism, and geochronology; hotspots; in French, English abstract ... 3641
sodium chloride (More at SALT ...)
SOFAR channels (More at OCEAN, SOUND ...)
software: computer
geochemistry; mineralogy; volcanology; petrology; applications ... 4060
mapping, cartographic generalization ... 5601
soil<s> (More at SEDIMENTS ...)
soils: marsh
pore water, chemistry ... 4071
solar activity (See also Sun ...)
solar cycles
geomagnetic field, variability; weather; climate ... 3417
atmosphere; correlations ... 3424
surface temperature; rainfall, over southern Africa; Quasi-Biennial Oscillation ... 5142
11-year; atmosphere; summer associations ... 5173
solar radiation (See also insolation; more at RADIATION ...)
model; climate, studies ... 5126
variability; Baltic Sea, over; weather, due to ... 5736
solitary waves (More at WAVES ...)
and hydraulic falls; flow, two-layer ... 4457
solitons (More at WAVES ...)
Hudson Bay, Manitounuk Sound; mixing, and internal hydraulics; stratified estuaries ... 6227
Solomon Islands
Bonin Arc; volcanic rocks, Ce and Nd isotopics; mantle, sources ... 5935
Solomon Sea
Coral Sea; benthic communities; bathymetric patterns ... 5503
Somali Current
currents, variability ... 4403
sonar (More at OCEANOGRAPHIC APPARATUS, SOUND ...)
side-scan and synthetic aperture; acoustics; processsing requirement and resolution capability comparison ... 3371
synthetic aperture; seabed, imaging ... 3372
chirp; sediments, marine, classification ... 3377
attenuation modeling; sediments, classification ... 3552
backscatter variation; Mexico: Gulf of; fan sediments ... 4674
images; Bering Sea; signal processing, interference fringes . 6313
multibeam; instrumentation, portable, shallow-water; KAE fansweep ... 6316
sonar: Doppler
and sodar; precision improvements ... 5016
sonobuoys (More at BUOYS ...)
sorbents
natural; oil spills, cleanup ... 5604
sound (See also acoustics, choruses, explosions, hydrophones, noise, scattering layers, sediment sound velocity, SEISMOLOGY, SOFAR channels, sonar, transducers; for atmospheric, oceanic and lithospheric acoustic properties see also AIR, ATMOSPHERE, LITHOSPHERE, OCEAN, seawater, SEDIMENTS, WATER ...)
transmission in waveguides, influence on; wind waves; acoustics ... 4492
absorption; acoustics, target motion analysis ... 4502
reduction, underwater; piezocomposite coating ... 4510
sea ice, breakup; floes, interactions; noise ... 4525
transmission air-to-water; acoustics ... 5096
source dependence on wave-breaking variables; acoustics 5098
absorption; seawater, boric acid relaxation; acoustics ... 5100
LF propagation; sediments, shallow-water, properties ... 5283
sound channels (More at OCEAN ...)
new type; acoustics, generation ... 3915
acoustics, propagation ... 4503
new type; noise, vector and phase structure; acoustics ... 4507
sound scattering
zooplankton, by ... 3726
sound waves (More at WAVES ...)
South Africa
between Cape Point and Cape Agulhas; upwelling, regime ... 3301
sea level ... 3303
S of; weather, transitions; Agulhas Current, over ... 3431
Vredefort Dome, an enigma; symposium report ... 3664
St. Helena Bay; phytoplankton, population dynamics; red tides, blooms ... 3732
Durban; waste disposal; impact of liquid discharges ... 4319
coastal zone; shoreline dynamics, need understanding 4344
1987-1990; oceanography, physical ... 4992
coast, 1960-90; shark attacks ... 5011
Sundays River Estuary; tides; sea level ... 5061
excavation of the *Oosterland* in Table Bay; marine archaeology ... 5634
Republic of; hydrography, research status ... 5645
South America
Copepoda; Smithsonian collection ... 3785
W coast; North America, W coast; Hawaiian Archipelago; tides, tables, 1992 ... 4438
E coast; North America, E coast; Greenland; tides, tables, 1992 ... 4439
Parana; Africa, Etendeka; volcanism, basaltic; mantle plumes; rifting, mechanics of ... 4747
Caribbean Plate; collision tectonics; accretionary terranes, wedging ... 5385
South Atlantic (More at Atlantic ...)
Inaccessible Island; geology, geochronology ... 4743
Diomedea, exulans, satellite tracking; seabirds, wandering albatross ... 4901
Paleocene, and Eocene; Southern Ocean; clay minerals; kaolinite, distributions, implications ... 5339
Indian Ocean; thermocline; water masses, exchange 5681
past 700 kyr; Foraminifera, planktonic; upwelling, increasing seasonal ... 5888
Brazil-Malvinas Confluence; water masses ... 6187
South Brazil Bight
response; atmospheric fronts, cold; circulation, subtidal .. 6252
South Carolina
sea level, rise; coastal zone ... 3895
North Inlet; macrobenthos, subtidal, long-term trends 5514
sounds; benthic communities; shrimp trawling, effects .. 5516
shelf; sea level, fluctuations; Gulf Stream, relationship 6196
South China Sea
Huanghai Sea; Bohai Sea; lead, -210; in Chinese, English abstract ... 5291
N, and Guangdong coast; Cenozoic; volcanism; in Chinese, English abstract ... 5404
coral reefs; ESR and U-series ages ... 5895
Basin, Hainan Island; magmatism; basalts, post-spreading Quaternary ... 6399
Basin; magmatism; mantle, evidence for endogenous Dupal component ... 6404
South Georgia Island
during rapid SST changes; seabirds, spp. abundance changes . 4899
South Indian Ocean Current
Indian Ocean; currents ... 5047
South Java Current
seasonal variability; currents ... 4416
South Pacific (More at Pacific ...)
Fiji Basin Ridge; hydrothermal fluids, chemistry ... 3567
E; Jurassic; Cretaceous; Tethys; marine connections 3600
autumn; air-sea interactions; carbon dioxide, air-sea disequilibrium ... 3959
W, evolution; New Zealand; ophiolites, Northland; tectonics, implications ... 4160
W; water column warming ... 5136
W; Lau Basin; North Fiji Basin; hydrothermalism; tectonics, and geological evolution ... 5245
volcanism; crust; mantle, exposed; faults, Garrett transform 5423
temperature; salinity ... 6238
Indian Ocean, SE; tropical cyclones; 1989-90 season 6261
aerosols, submicrometer particles; methanesulfonate, to sulfate molar ratio ... 6267
E; Decapoda; Pycnogonida ... 6494
South Shetland Islands
Admiralty Bay; Euphausia, superba, seasonal growth and mortality; krill ... 4290
Southern Bight
North Sea; aerosols; particulates, characterization 5169
Southern California Bight
Cnidaria, scyphozoan; Chrysaora, sp.; faunal associates . 3745
methane, subsurface maximum; water column 5801
Southern Hemisphere
weather, synoptic; scatterometry, satellite, from 3410
1990-91; climate, seasonal summary; rainfall, record 3419
cyclones, extratropical, simulations; model sensitivity 3451
Paleocene-Eocene boundary; circulation, oceanic and atmospheric, changes ... 3589

boundary currents, eastern 3882
extratropical teleconnections, wavelike 3974
autumn 1991; climate, seasonal summary; El Niño 5129
Southern Ocean (More at OCEANS ...)
sediments, evidence from; climate, effects on; water masses, North Atlantic Deep Water 3418
ice-ocean interactions; ocean-atmosphere interactions; coupled model studies 3436
Ross Sea sector; temperature; salinity; flow, geostrophic; vertical distributions 3857
helium; chlorofluorocarbons; water masses, tracers of .. 3887
World Ocean, emphasis on Atlantic sector; water masses, exchange 3890
water masses, biochemistry; circulation; collection 3893
voyage in; icebergs, B-9 3906
Scotia-Weddell Confluence; marginal ice zone; water column, upper, structure and evolution 3911
Indian sector, highly variable source/sink; surface, water; carbon dioxide, content 4010
between Elephant and South Orkney islands; organic matter, carbon; sea ice, zone 4014
particle flux, biosiliceous 4022
barite, suspended, as tracer of biological activity 4023
Atlantic sector; plankton; organic matter, sinking; stable carbon isotopes 4024
Atlantic sector; particle flux, and scavenging 4030
barite, formation; water column 4031
carbon dioxide, fixation dynamics 4037
W Indian sector; chlorofluoromethanes, relation with geochemical tracers 4049
productivity, new production vs. regenerated production concept 4206
South Georgia and Bransfield Strait; phytoplankton; nitrogen, assimilation, variations 4222
phytoplankton blooms; controlling factors 4227
annual production in; biogenic silica 4236
export flux; primary production, annual 4239
Euphausiacea; krill; spawning, season 4291
Atlantic sector; Ciliata; Tintinnidiidae, ecology and biogeography 4300
wind stress; ECMWF vs Hellermann and Rosenstein climatology 4593
sediments; opal, biogenic 4689
gravity field 4720
baseline; hydrocarbons; seawater 4818
zooplankton, gelatinous 4829
monthly distributions in; sea ice 5089
Atlantic sector; organic matter, DOC; Polar Frontal Zone 5191
Atlantic; Pacific; organic matter, DOC 5193
iron; fertilization; productivity; possible biogeochemical consequences 5220
chemistry; nutrients, depletion, impact; atmospheric carbon dioxide; simulations 5227
silica, biogenic, dissolution quantification; sediments 5297
Paleocene, and Eocene; South Atlantic; clay minerals; kaolinite, distributions, implications 5339
iron, hypothesis; productivity; ice ages, during 5454
Weddell-Scotia seawater; iron; manganese; fertilization, experiments; plankton, communities, effects on 5459
light, limitation; phytoplankton, biomass; nutrients, macro-, utilization 5484
irradiance, -mixing regime; chlorophyll, maximum; productivity, controls on 5486
archipelago; Prince Edward Islands; zooplankton, and micronekton, vertically migrating; predation, land-based, impact 5490
sea ice, role; ecosystems, structure 5971
Indian sector; seabirds 6027
Macrocystis, laevis; kelp, deep occurrence 6061
Antarctica, Bicosta spinifera; Baltic Sea, Saroeca attenuata; Choanoflagellata 6069
atmosphere; bromochloromethanes 6120
Indian sector; elements, major; nutrients; plankton biomass 6132
eddies, contributions; momentum flux 6169
and polar seas, distribution over; atmospheric ions; Aitken nuclei 6236
Antarctica, circum-, to 30°S; atlases, geological and geophysical 6512
Southern Oscillation
and ENSO; El Niño; ocean-atmosphere interactions; history of the terminology 5134
Quasi-Biennial Oscillation; atmosphere, relations 5156
Quasi-Biennial Oscillation; El Niño; stratospheric ozone, Dobson records 6237
South-West Africa (See also Namibia)
Southwest Indian Ridge
basalts, MORB petrogenesis 5931
Soya Warm Current
Okhotsk: Sea of, to; currents, volume transport; freshwater, supply; in Japanese, English abstract 4404
Spain
Ria de Vigo and the coastal shelf; water masses, exchanges; coastal zone 3282
Galician shelf; zooplankton, meso- and micro-, structure; biomass, and production; in Spanish, English abstract ... 3692
Ria of Vigo; nutrients, fluxes; organic matter, fluxes; red tides, relation to 5491
NE, off; fronts, shelf-slope; currents, inertial 5659
NW, Galician shelf; upwelling zones; phytoplankton, size classes 6004
NW, Ria of Pontevedra; Gyrodinium, cf. aureolum, green mass aggregations 6066
Ria of Vigo; estuarine flow, residual 6172
SE, Betic Cordillera; lithospheric flexure; tectonics, evolution 6388
Betic rifted margin; Mesozoic, evolution; lithosphere, dynamics; tectonics 6430
Betic Zone; tectonics, extension; crust, seismic inversion 6437
Spartina
alterniflora, belowground biomass; sediments, marsh; diagenesis 4082
alterniflora; Louisiana; marshes, salt, deteriorating; relationship among topography, hydroperiod, and growth 4261
anglica; history, origin, variations, ecology reviewed 6057
alterniflora; Texas, salt marsh; oil pollution 6083
spatial patterns
interpretation; geostatistical analysis 5969
zooplankton communities; temperature, satellite-measured SST 6002
spawning
mass; Australia, W, and Great Barrier Reef comparisons; corals 4277
season; Southern Ocean; Euphausiacea; krill 4291
area discovered; Mariana Islands, W of; Anguilla, japonica 5502
speciation (More at EVOLUTION ...)
extended; Galapagos Archipelago; islands, drowned; hotspots, downstream from 3575
marine; biogeography; scale of population structure 6084
species (More at BIOLOGY ...)
species: endangered
tracking; sonic, satellite, and radio telemetry techniques 5007
sea turtles, Kemp's ridley 5616
species: exotic
fish introductions, ecological and genetic implications 4328
species extinction (More at extinction ...)
species richness
deep-sea; diversity, estimation 4887
community structure; theoretical perspective 4962
spectrometer<s> (See also microspectrometers; more at REMOTE SENSING ...)
spectrometry
atomic; analytical chemistry; annual review 6276
spectrometry: plasma
techniques, applications and trends in the earth sciences 3527
earth science; symposium 3528
Speleoithonidae
n.fam; Bahamas, in anchialine caves; Copepoda, cyclopoid . 4295
spills: oil
Exxon Valdez; bacteria, marine; hydrocarbons, interactions with 3799
Great Barrier Reef, ReefPlan; contingency plans inadequate 3829
U.S., Oil Pollution Act; law; pollution 4985
cleanup; sorbents, natural 5604
Exxon Valdez; petroleum, detection via TM signature 5613
Brachyura; Uca, pugnax, effects of washing 6070
Exxon Valdez; pollution bioremediation 6118
fingerprinting 6310
spin splitters (More at SPLITTERS ...)
spin-up
boundary currents, western; flow, cross-equatorial 5040
spits (More at COASTS ...)
Spitsbergen
NW; sedimentation; fjords, seismic architecture 5265

spoils (More at WASTES ...)
sponges
Hong Kong; Copepoda, inhabitants, 8 n.spp. of siphonostomes; algae ... 4288
distribution, ecology; Ligurian Sea, and Tyrrhenian; Porifera 4892
spray (More at AEROSOLS ...)
spray droplets
sea salt; measurements ... 5780
spreading (More at PLATE TECTONICS ...)
spreading centers
basalts; magnetization, highs; discontinuities, associated with ... 3621
velocity variations; gravity, symmetrical anomalies; mid-ocean ridges ... 4120
spreading rate dependence; mid-ocean ridges; gravity field, structure ... 4123
axes; Iceland, and the Afar depression, evidence from; faults, strike-slip, parallel to ... 4162
Aegean Sea, area, coupled process; subduction zones ... 4732
Chile Ridge; hydrothermalism ... 5875
fossil; California, N; magma, petrogenesis; ophiolites, Trinity ... 5932
imagery; East Pacific Rise, 12°N; seismic tomography .. 6410
Okinawa Trough; basalts, chemistry, isotopics ... 6422
spreading ridges
rate; gravity, roughness ... 4722
Juan de Fuca Ridge; event detection ... 5378
East Pacific Rise, Pacific-Cocos-Galapagos junction; plate boundaries, triple junctions (RRR) ... 5912
spreading: seafloor
locus; Mariana Trough, S ... 5377
rate; crust, thickness ... 5942
rate, dependence; magnetic field, anomalies, anomalous skewness ... 6374
spreading systems
Red Sea, -Afar depression; rift zones ... 4727
spreading zones
structural development; volcanism, intensity ... 4751
Red Sea, opening; granites, A-type ... 5415
extinct; Norway Basin, Aegir Ridge; tectonics ... 6387
spring blooms
seawater, photoreduction in; iron, (III) ... 4849
Phaeocystis-dominated; English Channel; Copepoda, feeding and grazing rates ... 5975
dynamics; hydrography, spatial variability ... 5998
squalls (More at WINDS ...)
squid
diets; Antarctica; Cephalopoda ... 6007
standard seawater (More at SEAWATER ...)
standard water (More at WATER ...)
standards: measurement
hydrographic tables; International Oceanographic Tables; Practical Salinity Scale; International Equation of State of Seawater; history ... 4358
standing waves (More at WAVES ...)
stability and form in deep water ... 3315
statistical analysis
sampling, pitfalls; bias ... 3810
null hypothesis, debate; costs and rationality in ecological inference ... 4823
statistical power analysis
precautionary principle; importance in environmental decision-making ... 6116
stellar atmospheres
shock waves; breaking waves, on beaches; analogy ... 6233
Stenopus
n.sp., and S. cyanoscelis redescribed; Australia; Decapoda . 4920
Stercorarius
skua; Iceland, breeding in; seabirds ... 4900
sterenes (More at ORGANIC COMPOUNDS ...)
Sterna
paradisaea; Antarctic Peninsula; seabirds; migration, northbount ... 6482
sterols (More at ORGANIC COMPOUNDS ...)
stochastic geometry
applications; plankton ecology ... 6447
stochastic phenomena
nonlinear phenomena; mathematical analysis, the grand challenge for partial differential equations ... 3813
Stockholm
Sweden; sea level, changes, periodicities ... 5060
Stokes waves (More at WAVES ...)
Stommel: Henry M.
history of oceanography; obituary ... 6129
Stoneley waves (More at WAVES ...)
storm<s> (See also cyclones, hurricanes, typhoons ...)
storm forecasting
Indian Ocean, N, over; cyclones, track prediction ... 3452
tropical cyclones; role of aircraft reconnaissance ... 3461
QE II storm development; scatterometer data, impact; numerical weather prediction ... 3464
intensity prediction; tropical cyclones ... 4613
hurricanes, tracking ... 4614
hurricanes, tracks; wind, satellite-derived, impact ... 4616
challenges; Guam, Joint Typhoon Warning Center; tropical cyclones ... 6273
storm surges
Argentina; Rio de la Plata, Estuary; tides ... 3306
North Sea, and Danish Belts, operational hydrographic warning system; tides, extreme ... 3465
Texas, and Louisiana, shelf; currents; hurricanes, induced by ... 3962
North Sea, model; tides ... 4442
hydrodynamic model ... 5079
storm waves (More at WAVES ...)
storms
related to; Mexico: Gulf of; air-sea interactions ... 3957
Gorbush, Dec '89; Mediterranean Sea; simulation ... 4606
during; California, shelf; seabed, roughness; shear stress .. 4660
oceanic response; ocean-atmosphere interactions ... 5153
features; Caribbean Sea, S; coral reefs ... 5843
storms: benthic
Mediterranean Sea ... 3878
Pacific, subequatorial ... 4407
storms: tropical
Pacific, equatorial, origin in ... 3981
formation; El Niño, ENSO, relationship ... 5767
strait circulation
barotropic flow ... 3860
straits (More at COASTS, ISLANDS ...)
flow, reductions; bridges, effects ... 6103
flow; water masses, exchange ... 6167
stratification (More at FLUID DYNAMICS, SEDIMENTS ...)
effects; density fronts, on ... 3393
simple models ... 3399
annual cycles; Georges Bank, S; North Atlantic ... 4385
Weddell Sea, Maud Rise effects; circulation; gyres, Weddell 4389
stable; turbulence, anisotropy and dissipation ... 4535
summer; Denmark, coastal waters; picophytoplankton ... 4866
extreme, during; German Bight; frontogenesis; in German, English abstract ... 5049
conditions; seamounts, over; eddies, formation; Taylor caps 5106
stratification: density
during; Adriatic Sea, N; suspended matter, nature, sedimentation ... 3504
stratification: thermohaline
self-sustaining heat exchange pump ... 4335
intrusions, dynamics; fluid dynamics ... 4548
stratified currents (More at CURRENTS ...)
stratified estuaries
Hudson Bay, Manitounuk Sound; solitons; mixing, and internal hydraulics ... 6227
stratified flow (More at FLOW ...)
topography, over; fluid dynamics ... 5732
stratified fluids
rotating; line sink ... 3402
vorticity, lens-like; fluid dynamics ... 3403
currents, finestructure; conductivity microsensor ... 3849
mixing, shear ... 4532
stratified thermocline
mixed layer; model ... 3278
stratocumulus clouds
clearing episodes ... 5158
stratosphere (More at ATMOSPHERE ...)
effects; Mount Pinatubo, Philippines, 1991; climate, effects; volcanic eruptions ... 4750
stratosphere: tropical
Quasi-Biennial Oscillation ... 3440
stratospheric oscillations
QBO; El Niño ... 4586
stratospheric ozone
depletion; Antarctica, waters around; radiation, UV; phytoplankton, biology ... 4865
measured trends ... 5166

equatorial; annual, quasi-biennial and ENSO variations 5771
depletion; Antarctica; irradiance, UV, effect on 5772
Dobson records; Quasi-Biennial Oscillation; El Niño; Southern Oscillation 6237
depletion; Antarctica; biosphere, significance to 6265
atmospheric chemistry; INSTAC program 6266
stratospheric winds (More at WINDS ...)
stratus clouds (More at CLOUDS ...)
strontium
isotopics; estuarine sediments; paleoclimate, and -salinity . 3590
isotope record; Phanerozoic; World Ocean 4688
isotope variation; seawater; climate, influences; 300 kyr record 5321
isotopes; Ganga-Brahmaputra River, system; Bengal: Bay of, fluxes to; rubidium; weathering, Himalayan 5794
isotope evolution; seawater; tectonics, role 5796
structure (See also fine-, horizontal-, micro- and vertical structure; More at ATMOSPHERE, LITHOSPHERE, OCEAN, SEDIMENTS; FRONTS, GRADIENTS, INTERFACES, LAYERS, ZONES ...)
structures (See also beams, breakwaters, offshore-, pipelines, revetments, rigs, PLATFORMS, SEDIMENTARY STRUCTURES; more at INDUSTRY, POWER ...)
Stylasteridae
62 spp.; New Zealand; Cnidaria; Hydroida 5538
Subarctic Front
North Pacific, W; water masses 4433
subducting slabs
olivine, metastable tongue, waveform effects; crust 3668
subduction (More at PLATE TECTONICS ...)
history; mantle convection 3665
frontal, to; Caribbean Plate, N boundary; faulting, transcurrent, from 4729
initiation and evolution; subsidence, rapid, following; tectonics 4763
effects; mantle convection 4792
and metamorphic evolution; California, Franciscan Complex; nappes; tectonics 5346
components; Izu-Bonin Arc; lava, chemistry 5405
subducting slabs stagnant; Pacific, W; mantle, transition zone 5419
downgoing slab; olivine, metastable 5424
thermomechanics; continental lithosphere 5432
geometry; Mexico, Isthmus of Tehuantepec; Cocos Plate, downgoing, stress state 5915
of pelagic carbonates; Cenozoic, during; weathering, chemical; carbon cycle, implications 6353
subduction: ablative
tectonics 6397
subduction zones (More at LITHOSPHERE ...)
Cascadia; Holocene, Late; tectonics, and paleoseismicity ... 3625
Makran (Iran, Pakistan); earthquakes, great thrust; plate boundaries, along, aseismic slip 3653
earthquakes, underthrusting; moment release, depth distribution 3670
Franciscan and Cedros complexes; organic matter; petroleum, missing 4171
Aegean Sea, area, coupled process; spreading centers 4732
volcanism, source region 4744
North Pacific, W; earthquakes, migration along 4776
Gorda Plate; Eel River Basin; crust, deep structure 4782
earthquakes, Mariana, 1990 4796
strain partitioning; New Zealand, Hikurangi margin; tectonics 5371
thermal structure; seismic discontinuities 5434
Kanto, Japan; plate boundaries, Philippine and Pacific 6380
plate convergence, oblique; crustal deformation, forearc; tectonics 6396
earthquakes, thrust-type; seamounts, asperities; physical model for rupture 6413
Lesser Antilles, Arc, 1981-88; seismicity, shallow; earthquakes; in French, English abstract 6419
Submarine Automatic Remote Television Inspection Equipment (Use SMARTIE)
submarine canyons
levees; Antarctica, around 4659
Wilmington, South Wilmington, North Heyes; Quaternary; Foraminifera 5319
Taiwan, SW, off, Fangliao canyon; morphology and echo characters 6323
submarine caves
fauna; Mysidacea 6499
submarine channels
geometry; deep-sea fans, classification 6322
submarine eruptions
volcanism, Macdonald Seamount, 1989; gas-rich exhalations . 3640
submarine lavas
Philippine Sea; magma, implications of origin 3643
submarine volcanoes
activity; methane, anomalies; helium, -3 anomalies 4139
submarine weathering (More at erosion, weathering ...)
submarines
nuclear; Arctic area, research, for 6105
submarines: nuclear
sunken; Norwegian Sea; environmental monitoring 4973
submersibles (More at VESSELS ...)
subsidence
rapid, following; subduction, initiation and evolution; tectonics 4763
graben; faulting, dyke-induced; rift zones, volcanic, in 4789
coastal; China, Qiongzhou Strait; tectonics; in Chinese, English abstract 5917
subsidence: basin
Cenozoic; Vøring Plateau, Outer 3629
subtropic<s> (More at tropics ...)
succession: community
Fucus, canopy vegetative regeneration 5563
suction waves (More at WAVES ...)
Sudbury Structure
and Igneous Complex, origin; Canada; impact craters 3656
Suez Canal
Lessepsian migrations; biogeography; in French, with English abstracts, 6 papers; 7 p 3687
through; plankton, Indo-Pacific; migration, potential 3688
Suez: Gulf of
Red Sea; Mediterranean Sea, Levantine Basin; microplankton 3714
Red Sea, parting of; Israelites, crossing; an oceanographic explanation 5013
geology; Miocene; sediments, biofacies development 5326
sulfates
reduction, due to; Okinawa Trough, CLAM hydrothermal field; alkalinity, high 3566
atmospheric aerosols; combined effects on surface air temperature 3985
and sulfite, determinations; seawater, single sample 3990
high concentrations, not limited by; nitrogen fixation, molybdenum-dependent 4271
reduction, and thiosulfate consumption; microbial mats 5536
seawater, analysis; oscillopolarographic titration; in Chinese, English abstract 5790
sulfide deposits
Au-bearing; mid-ocean ridges; mineralogy, geochemistry ... 3671
massive; Juan de Fuca Ridge; hydrothermalism 5311
precipitation temperature; seafloor; helium/heat ratios .. 6352
sulfides
oxidation; Black Sea; anoxic chemocline 3510
carbon dioxide; carbonates; diffusion technique for determinations in water and sediments 4619
sulfites
seawater, determination in; thiosulfates 6278
sulfur
Black Sea; Cariaco Trench, off Venezuela; carbon; nitrogen; stable isotope studies 3509
speciation and sulfide oxidation; Black Sea; water column . 3512
fluxes, origin; Black Sea; iron; carbon, organic 3513
geochemistry; Peru, margin; sediments, organic-rich 3553
natural species; U.K., contributions to S budget; North Atlantic, from 3986
cycle; iron, cycle; aerosols; cyclic links 3989
biogeochemistry; Africa, S; Lake Mpungwini 4644
metabolism, role; carbon, budget; eutrophic ecosystems; sediments, dynamics 4646
reactions; diagenesis, early, during 4671
-containing pyrolysis products; organic matter, sediment; chemical analysis 5175
emissions to, natural source; atmosphere 5768
sulfur dioxide: atmospheric
Mauna Loa, Observatory 5165
sulfur dioxide disposal
seawater, in; proposal, discussion 6515
sulfur hexafluoride
gas exchange; tracers, seawater; helium, -3 3473

Sumatra
off; fault zones, Mentawai; tectonics, geodynamics 4759
Sunda Arc
-Banda Arc; Indonesia; magma, sources, constraints from He isotopes 4748
sunlight (More at LIGHT ...)
sunspots
polar vortex, North, record contraction in 1989; surface temperature, equatorial; Quasi-Biennial Oscillation; relationships 4585
superchrons
superplumes; mantle plumes; magnetic field; report 5001
supercontinents
U.S., SW; Antarctica, E; Australia, and Laurentia, Pacific margins; plate tectonics, reconstructions; discussion ... 3631
cycle; mountain belts; plate tectonics 5389
supernatant water (More at WATER ...)
superplumes
superchrons; mantle plumes; magnetic field; report 5001
surf (More at COASTS, WAVES ...)
surf beat
model 5071
surf zone (More at COASTS, ZONES ...)
surface (See also sea- and ocean surface; more at OCEAN ...)
light, parallel beam reflections, intensity fluctuations 3366
over; wind stress, measurement 3902
microlayer; salinity, determination 4008
water; Southern Ocean, Indian sector, highly variable source/sink; carbon dioxide, content 4010
soundings; lidar, light intensity distribution in the image plane . 4380
structural dynamics; waves, images, statistical parameters 4465
roughness; acoustics, scattering model 4493
wind-driven, from; acoustic scattering 4499
irradiance, solar 4554
volume scattering model 5015
global mean sea; satellites, altimetry data 5027
mean, estimation; gravity field, error covariance weighting ... 5363
heat flux; freshwater, fluxes; weather forecasting, U.K. Meteorological Office 5785
determinations; geodesy 5906
instantaneous; wave height; currents; GPS data 5907
velocity estimates; remote sensing, AVHRR 6149
surface boundary layer (More at BOUNDARY LAYERS ...)
surface circulation (More at CIRCULATION ...)
surface currents (More at CURRENTS ...)
surface drift (More at DRIFT ...)
surface energy budget
Pacific, W tropical; atmospheric convection, deep; precipitation, associated, effects 6256
surface films (More at films ...)
slicks, formation mechanisms 3429
temperature, recording during squall conditions 3853
flow, effects; internal waves, field, in 4476
light, attenuation coefficients 4484
surface glitter
scintillations 4383
surface heat
balance; Pacific; Indian Ocean; El Niño, mature phase 1982-83 6253
surface heat budget 3415
surface intrusions (More at INTRUSIONS ...)
surface jets (More at JETS ...)
surface layer (More at LAYERS ...)
spreading in; contaminant jets 6516
surface microlayer
films; surfactants, properties 5181
films, surface pressure-area isotherms 5182
slicks; films 5623
Gdansk: Gulf of; bacteria 6032
surface roughness
length fluctuations; wind; waves 3901
anisotropy; laser scanners, glint measurement method 4382
surface temperature (More at TEMPERATURE ...)
Sargasso Sea; eddies, baroclinic; westward-propagating anomalies 3275
anomalies; weather forecasting, long-range, impacts on 3463
remote sensing, images, edge detection algorithm 3850
World Ocean, interhemispheric contrasts of anomalies 3944
SST change; greenhouse effect, clear-sky, sensitivity 3951
Japan, Banda coast; interdiurnal variation; in Japanese, English abstract 4387
atmospheric circulation; modelling intraseasonal LF variations 4572
equatorial; polar vortex, North, record contraction in 1989; sunspots; Quasi-Biennial Oscillation; relationships .. 4585
glaciation, terminations I, II, and IV 4690
microwave sensors 5017
measurements comparison 5019
anomaly; North Pacific; circulation, GCM response 5139
rainfall, over southern Africa; solar cycles; Quasi-Biennial Oscillation 5142
monsoon rainfall 5147
remote sensing, algorithms compared 5635
convection, deep, effects 5647
Pliocene, to early Pleistocene; Mediterranean Sea; productivity 5889
remote sensing, AVHRR, errors 6147
aerosols, radiative corrections; remote sensing, AVHRR ... 6150
Indian Ocean, W equatorial; 26-day oscillation 6157
atmosphere, 500-mb height anomaly; singular value decomposition 6235
rainfall, Sahel; interactions, predictability 6249
Arabian Sea; monsoon rainfall, India; ocean-atmosphere interactions; associations 6250
North Atlantic; monsoons, South Asia; ocean-atmosphere interactions; relationship 6251
anomaly; weather forecasting, long-range, impact on 6275
surface tension
films, natural; wave damping; wind, properties 5081
surface waves (More at WAVES ...)
short; evolution on very long surface wave 5073
surface wind
Pacific, W equatorial; El Niño 3442
surfactants
organic; wave damping, and surface pressure, effects; seawater 3314
images revealed by; wind, fronts; slicks 4584
air-sea interface, sea-to-air transfer at; bubbles, bursting, by 5148
properties; surface microlayer; films 5181
surge<s> (More at WAVES ...)
surges: storm
Argentina; Rio de la Plata, Estuary; tides 3306
North Sea, and Danish Belts, operational hydrographic warning system; tides, extreme 3465
Texas, and Louisiana, shelf; currents; hurricanes, induced by 3962
North Sea, model; tides 4442
hydrodynamic model 5079
Suruga Bay
internal tides; sea level, influence on 5709
Sagami Bay; internal tides; currents 6214
surveys: bathymetric
Indian Ocean, Central Basin 5836
surveys: geodetic
maritime boundaries; algorithm 5909
surveys: hydrographic
use of spatial statistics 5644
Adriatic Sea, 1971-83 6155
surveys: seismic
crust; BIRPS data 5624
suspended matter (More at PARTICULATE MATTER ...)
particles, size; estuaries 3501
nature, sedimentation; Adriatic Sea, N; density stratification, during 3504
surface reactivity; Rhone River; trace elements, sorption; relations 4025
North Carolina, Neuse Estuary; particulates 4033
tracking via; Juan de Fuca Ridge; hydrothermal plumes 4682
Europe, W, estuaries; particle size, distributions 5207
Europe, W, estuaries; particle size; flocs, formation and breakup 5208
trace metals; particulates; ICES intercomparison exercise .. 5210
India, coast; particulates, biochemistry 5211
load calculations; sediments, noncohesive 5278
Pacific, W; atmospheric aerosols; seawater 5782
river transport; coastal zone 5811
composition; Weddell-Scotia Confluence 5812
sampling; particulates, large amorphous; in Japanese, English abstract 5815
patterns and controls; New England, S, shelf and slope 5816
particulates, sorption on; zinc 6281
Magellan: Strait of; particulates, distribution, chemistry .. 6295

India, central E coast; particulates, biochemistry 6296
suspended sediments (More at SEDIMENTS ...)
dispersion; North Sea; lead, transport 4051
discharge; Maine: Gulf of, during April 1987 100-yr flood ... 4077
derivative reflectance spectroscopy 4633
Baffin Island, McBeth Fjord 5212
fiber optic sensor 5250
suspension feeders
benthic; seston, availability, quality 5209
sustainable development
coastal zone 4981
Svalbard
near; macrofauna, sympagic; sea ice 3717
fjords; Pinnipedia; Phoca, hispida, ringed seals; breeding habitat, populations 4244
Franz Josef Land; polar seas; ice, tidal, dynamics 4477
area; seabirds, 2 spp.; PCBs 5569
Sverdrup circulation
North Atlantic, along 24°N 5660
Sverdrup gyres
instability; model 3405
swash (More at WAVES ...)
swash zone (More at COASTS, ZONES ...)
Sweden
zooplankton entrainment; power plants 4951
Stockholm; sea level, changes, periodicities 5060
W coast; zooplankton, feeding ecology; grazing; phytoplankton blooms 6003
coast; Baltic Sea; hydrocarbons, PAHs; organochlorines, dioxins, dibenzofurans; pollution, flux estimates, pattern recognition of particulates 6309
swell (More at WAVES ...)
waves, nonlinearity; phase couplings 6209
swimming microbiota
hydrodynamic phenomena in suspensions 4367
symbiosis (More at ECOLOGY ...)
symbiotic microalgae
zooxanthellae; corals, and sea anemones, release after cold shock 3747
symposia: oceanographic
OCEANS '90 held in South Africa 4972
Synechococcus
spp., seasonal distribution; Skagerrak, E; cyanobacteria ... 4207
Synisoma
wetzerae n.sp., and first record from New World; Isopoda, idoteid 3784
Systeme Probatoire d'observation de la Terre (Use SPOT)

Tadjoura: Gulf of
evolution; Ethiopia, Afar, evolution 4130
tagging
effects; seals, fur, pup growth 3737
Tagus Abyssal Plain
Iberian Peninsula; continent-ocean boundaries; crust . 4787
Taiwan
E, evidence from; Miocene, -Pliocene; Luzon Arc, collapse; collision tectonics 5375
Basin; crust, structure; hydrocarbons, potential; in Chinese, English abstract 5438
Reptantia, scyllarid; Scyllarus, formosanus 5545
NE of; slope currents, fluctuations 6177
NE, off; manganese, distribution; water column; in Chinese, English abstract 6279
NE, off; water column, scavenging in; radionuclides, Th, U 6298
SW, off, Fangliao canyon; submarine canyons; morphology and echo characters 6323
Taiwan Strait
currents, structure; finestructure, T-S 5671
Tanaidacea
2 n.spp., 1 n.gen.; California 4297
tanker<s> (More at VESSELS ...)
tanks (See also flow-through systems, flumes, chambers ...)
Tanzania
Dar es Salaam; coastal sediments; metals, heavy 6308
taphonomy
Pleistocene; California: Gulf of, N; Mollusca, shells; neotectonics 5898
taphonomy: microfossil
sediments, fabric; ooze, pelagic, relationships 5901
tar (More at PETROLEUM ...)
Tasman Sea
thermocline; water masses, Bass Strait Water 3300
Tasmania
Bathurst Harbour Estuary, rope fiber habitats; epifauna, mobile, distribution patterns 3740
SE; Mysidacea; Tenagomysis, 3 n.spp. 3778
New Zealand; carbonates, temperate shelf, O and C isotopic fields 5196
Macquarie Harbor; trace elements; humic matter; organic matter, sedimentary; chemistry 5216
W; carbonate sediments; variations with water depth 5299
Bathurst Harbor Estuary; plankton, distribution; water column, seasonal changes 6455
Tasmantid Seamounts
mantle plumes; shallow melting and plume contamination ... 4135
taxonomy
phytoplankton; expert systems 4237
technetium
effects; microbiota 4318
technology transfer (More at DEVELOPING COUNTRIES ...)
tectonic<s> (See also expanding Earth theory, isostasy, polar wander, rhegmatism, undation theory; more at EARTH, LITHOSPHERE ...)
tectonic stress
earthquakes, as record; plate boundaries, Eurasia-Africa .. 4134
tectonic zones (More at LITHOSPHERE ...)
tectonics
Tonga Trench, slopes, rock recycling; gravity flows 3537
evolution; Jurassic; Africa, NW corner; sediments 3580
Cenozoic, Late; Japan, northern Honshu; sedimentary basins, development; volcanism; relationships 3603
and paleoseismicity; Holocene, Late; subduction zones, Cascadia 3625
evolution; Afar triangle; Ethiopia; triple junctions 3626
plate motions, no net rotation model of current velocities 3630
Tethys, examples from; paleogeography, processes affecting 3634
magmatism, evolution; Tethysides; orogenies 3646
Red Sea, birth and early history; rift zones; crust; symposium papers 4063
neo-; Argentina, coastal zone; sea level, changes 4070
Red Sea; rift valleys, axial, and deeps; crust, implications for thinning processes 4131
pull-apart model; Red Sea, shear-controlled evolution 4132
neotectonic structure; Marmara: Sea of; crust 4133
Costa Rica, Pacific coast; Cocos Ridge, uplift; plate motions; crustal deformation 4147
Red Sea Rift, junction with Dead Sea transform; Tiran Island, internal block 4149
implications; Red Sea, Suakin Deep; earthquakes, micro-, activity 4159
implications; New Zealand; South Pacific, W, evolution; ophiolites, Northland 4160
forearc; Mariana Forearc, fluid seeps; seamounts, emplacement 4683
Paleogene; Kamchatka, and Komanorsky islands; paleomagnetism 4710
geodynamics; Sumatra, off; fault zones, Mentawai 4759
subduction, initiation and evolution; subsidence, rapid, following 4763
mostly Earth; crust, formation, evolution; planets; colloquium 4779
California, Santa Maria Basin; crust, deep structure 4783
lithospheric flexure; crust, stress 4785
and geological evolution; Lau Basin; North Fiji Basin; South Pacific, W; hydrothermalism 5245
and other changes; Proterozoic, latest, stratigraphy and Earth history 5332
California, Franciscan Complex; nappes; subduction, and metamorphic evolution 5346
New Zealand, Hikurangi margin; subduction zones, strain partitioning 5371
orogenic belt evolution; Paleozoic, Late, to Early Mesozoic; Pacific, circum-; Japan, SW; Korea, South 5373
Caribbean Plate, morphology, structure; plate boundaries, development; margin, accretionary 5374
forearc evolution; accretionary prisms, Kodiak Formation; strain variations 5376
Juan Fernandez Plate, microplate, evolution 5380
evolution; East African Rift, system; Kenya, Rift, northern 5382

Gibraltar Arc, kinematics; paleomagnetic field, rotations . 5384
global; geodesy, from space; plate motions 5386
continental; mantle plumes 5387
and structure; New Zealand, Taupo volcanic zone; backarc basins 5408
Pacific, Nova-Canton Trough; fracture zones, new evidence of one 5427
Red Sea, pull-apart evolution; rift zones 5428
framework; Aden: Gulf of; hydrocarbons, prospects 5437
role; seawater; strontium, isotope evolution 5796
trend analysis of features; bathymetry 5834
and currents, influences; Guinea Plateau, SW; margin, geomorphology 5839
Alaska: Gulf of; plate boundaries, Pacific-North American kinematic framework; plate boundaries, Cocos-Pacific 5913
China, Qiongzhou Strait; subsidence, coastal; in Chinese, English abstract 5917
long timescale; deformation, short timescale; relationships ... 5922
evolution; Mount Etna; volcanoes, gravitational spreading . 5924
dynamics; mantle convection 5945
seismotectonic model; Hawaii, W 5948
and morphology; Mid-Atlantic Ridge 5950
evolution; North Pacific, E; fault zones, Blanco Transform morphology 6379
since the Oligocene; Red Sea; Aden: Gulf of; Ethiopian Rift; crust, kinematics and deformation; in French, English abstract 6381
Lau Basin, ODP Leg 135; backarc basins, evolution 6384
implications; Afar, 1989 sequence; earthquakes; rift zones . 6386
Norway Basin, Aegir Ridge; spreading zones, extinct 6387
evolution; Spain, SE, Betic Cordillera; lithospheric flexure . 6388
rotations; Mesozoic; Gondwana, within 6392
Archean, Early; crust, formation; plate motions 6395
plate convergence, oblique; crustal deformation, forearc; subduction zones 6396
ablative subduction 6397
force distribution; earthquakes, small 6421
Holocene; Japan, Hokkaido; crust, tilting 6424
Mesozoic, evolution; Spain, Betic rifted margin; lithosphere, dynamics 6430
Red Sea; crust, nature 6434
extension; Spain, Betic Zone; crust, seismic inversion 6437

tectonics: arc
Holocene; Hellenic Arc 5910

tectonics: collision
Neogene; Philippines, central; in French, English abstract .. 3627
arc-continent; Indonesia, E; lithospheric extension, post-collision; discussion 3632
Tibet; crust, uplift 4737
Miocene, -Pliocene; Taiwan, E, evidence from; Luzon Arc, collapse 5375
South America; Caribbean Plate; accretionary terranes, wedging 5385

tectonics: extensional
Andaman Sea; possible stress model 4728
Baltimore Canyon, Trough 5379

tectonics: margin
passive; Red Seas and central; Antarctica, Wilkes Land, comparison to 4129
Red Sea Rift, E and W, contrasting styles 4146
New Zealand, Hikurangi margin; accretionary prisms, birth 5372
plate boundaries; transform-convergent boundaries 5390

tectonics: planetary
structures; Earth; Mars; Venus 6444

tectonics: plate
reconstructions; U.S., SW; Antarctica, E; Australia, and Laurentia, Pacific margins; supercontinents; discussion . 3631
continents, growth; accretionary wedges, role 3635
Gondwana, tectonomagmatic controls on breakup; Antarctica, proto-Pacific margin 3637
mid-ocean ridges; overviews 4379
mountain belts; supercontinents, cycle 5389
Proterozoic, to Mesozoic; Gondwana, E 5391
Madagascar, fragment of Dharwar craton of India 5918
hotspots; mantle; magmatism 6390
convection-driven; models compared 6394

tectonics: rift
Mediterranean Sea; Valencia Trough, geology and geophysics 6318

tectonosphere
Siberia, -Atlantic system; crust, density structure 4795

tectosphere (More at EARTH ...)

Tees Esurary
Holocene; sea level; sedimentation, intertidal 4661

tektites (See also microtektites; more at SILICATES ...)

teleconnections: atmospheric
circulation, dynamics, northern summer 4588

teleconnections: extratropical
wavelike; Southern Hemisphere 3974

teleconnections: hemispheric
eddy heat flux 4590

telemetry (See also biotelemetry; more at COMMUNICATIONS ...)

telephone cables (More at CABLES, COMMUNICATIONS ...)

television (More at COMMUNICATIONS ...)

TEM (More at MICROSCOPY ...)

Temora
longicornis, grazing pressure; Netherlands, tidal inlet; Calanoida; Phaeocystis, bloom, on 4204

temperature (More at HEAT ...)
above the seafloor; thermometers, acoustic backscatter; instrumentation 3263
SST and 20°C isotherm; Pacific, tropical 3264
subsurface; tropics; statistical interpolation scheme 3265
Canary Islands, waters around; salinity; nutrients, and chemistry; in Spanish, English abstract 3266
Black Sea; ventilation; salinity, and density 3269
relation to; sea level, rise 3304
air and sea, fluctuations; Mediterranean area, past 120 years 3411
diurnal, evidence for asymmetric changes; global warming .. 3420
sea, near-freezing; vessel icing; prediction; discussion 3462
effects; productivity, primary, estimation; remote sensing . 3691
surface and water column; thermal analysis, Optimum Thermal Interpolation System improvements 3851
recording during squall conditions; surface films 3853
Southern Ocean, Ross Sea sector; salinity; flow, geostrophic; vertical distributions 3857
structure; shear, high-wavenumber; Patches Experiment 3923
ocean, to the west; Australia; climate, winter 3963
sea, effects; Australia, W coast; seagrasses; algae 4310
merchant ships' measurements; climate, variability studies ... 4559
heat, balance, oceanic; 4-D analysis of hydrophysical fields ... 4568
role; ocean-atmosphere interactions; circulation, general air and sea 4576
changes, air and sea; ocean-atmosphere interactions; air-sea interactions 4578
Newfoundland, shelf; salinity 5020
wind speed; waves, x-band 5070
fluctuations; mixed layer; small-scale activity 5108
clouds; radiative-convective oceanic boundary-layer model ... 5135
influence; Antarctica, King George Island; microbiota, ETS activity 5537
SST, at 150 m, and average over upper 400 m; Atlantic, WOCE network evaluation 5637
vertical structure; Korea, East Sea; water collumn; currents; in Korean, English abstract 5642
precipitation, tropical; salinity; effects on surface layer structure; in Chinese, English abstract 5750
satellite-measured SST; zooplankton communities; spatial patterns 6002
South Pacific; salinity 6238
changes recorded; World Ocean; silica, biogenic; oxygen, isotopic studies 6366

temperature: atmospheric
Weddell Sea, over; remote sensing, retrieval scheme 3412
structure; Pacific, W tropical, over; El Niño, development, during; in Chinese, English abstract 5735

temperature fronts (More at FRONTS ...)

temperature: global
trends 5128
spectra; climate change, detection 6239

temperature: ice
Arctic area; AVHRR remote sensing 5088

temperature: precipitation
sulfide deposits; seafloor; helium/heat ratios 6352

temperature: surface
Sargasso Sea; eddies, baroclinic; westward-propagating anomalies 3275
anomalies; weather forecasting, long-range, impacts on 3463
remote sensing, images, edge detection algorithm 3850
World Ocean, interhemispheric contrasts of anomalies 3944
SST change; greenhouse effect, clear-sky, sensitivity 3951

Japan, Banda coast; interdiurnal variation; in Japanese, English abstract ... 4387
atmospheric circulation; modelling intraseasonal LF variations ... 4572
equatorial; polar vortex, North, record contraction in 1989; sunspots; Quasi-Biennial Oscillation; relationships ... 4585
glaciation, terminations I, II, and IV ... 4690
microwave sensors ... 5017
measurements comparison ... 5019
anomaly; North Pacific; circulation, GCM response ... 5139
rainfall, over southern Africa; solar cycles; Quasi-Biennial Oscillation ... 5142
monsoon rainfall ... 5147
remote sensing, algorithms compared ... 5635
convection, deep, effects ... 5647
Pliocene, to early Pleistocene; Mediterranean Sea; productivity ... 5889
remote sensing, AVHRR, errors ... 6147
aerosols, radiative corrections; remote sensing, AVHRR ... 6150
Indian Ocean, W equatorial; 26-day oscillation ... 6157
atmosphere, 500-mb height anomaly; singular value decomposition ... 6235
rainfall, Sahel; interactions, predictability ... 6249
Arabian Sea; monsoon rainfall, India; ocean-atmosphere interactions; associations ... 6250
North Atlantic; monsoons, South Asia; ocean-atmosphere interactions; relationship ... 6251
anomaly; weather forecasting, long-range, impact on ... 6275

Tenagomysis
3 n.spp.; Tasmania, SE; Mysidacea ... 3778

tenure
science; women; careers ... 4989

tephra (More at volcanic ...)

terranes: carbonate
unconformities; Mexico: Gulf of; Florida Escarpment, development ... 3556

terranes: exotic
Mesozoic; North America, W; marginal seas ... 4735

Tertiary
and Quaternary; West Antarctic Ice Sheet, Ice Stream B; fossil record, microfossils; ice sheets, beneath ... 3604
Pleistocene; Iceland; faults, structure ... 4761
North Sea, Belgian sector; sediments, erosion surface ... 5838
Late; Mediterranean Sea, off Israel; margin sediments ... 5865
Valencia Trough; Mediterranean Sea, W; crust, structure; sedimentation, history ... 6383

Tethys
African; Turonian, and early Senonian; carbonate platforms, evolution; margin, segmented continental ... 3574
Jurassic; Cretaceous; South Pacific, E; marine connections 3600
circum-Mediterranean; Paleozoic; rifting, and paleogeography ... 3609
western; Permian, evidence for Tethys position; fossil record, circumpacific deep-water faunas ... 3615
Jurassic, Mid-Late; Cretaceous; Brachiopoda, biogeography; fossil record, in relation to tectonic and paleoceanography ... 3618
examples from; paleogeography, processes affecting; tectonics ... 3634
rifting; margin, processes ... 3636
paleogeography; paleoceanography ... 3678

Tethysides
magmatism, evolution; orogenies; tectonics ... 3646

Texas
San Antonio Bay; meiofauna, consumption by; bacteria, sediment; microphytobenthos ... 3746
and Louisiana, shelf; currents; storm surges; hurricanes, induced by ... 3962
Gulf coast; basement; margin, passive; deep structure ... 4758
Anostraca; Branchinella, new ... 5543
Houston Ship Channel; organic matter; carbon, stable isotopic analysis; seawater; sediments ... 5826
Lavaca Delta and bay; freshwater inflows; macrobenthos, effects on ... 6016
salt marsh; Spartina, alterniflora; oil pollution ... 6083

Thailand
new Permo-Carboniferous geochemical data; volcanic arcs, model ... 3639

Thailand: Gulf of
Pattaya Bay; reef communities; temporal variations ... 3738

Thaliacea
Mediterranean Sea, E; Red Sea; in French, English abstract 3767

thermal (More at HEAT ...)

thermal analysis
Optimum Thermal Interpolation System improvements; temperature, surface and water column ... 3851

thermal boundary layers
formed in water during calm sunny weather ... 4582

thermal conductivity
heat flow ... 5370

thermal convection
mantle fluids; numerical simulations ... 3663

thermal currents (More at CURRENTS ...)

thermal effluents (More at effuents ...)

thermal gradients (More at GRADIENTS ...)

thermal pollution (More at POLLUTION ...)

thermal radiation (More at RADIATION ...)

thermistor buoys (More at BUOYS ...)

thermocline (More at GRADIENTS, OCEAN ...)
main; mixed layer, role; vorticity, potential ... 3289
Tasman Sea; water masses, Bass Strait Water ... 3300
convection, diffusive, onset; salt fingering, evolution ... 3396
oxygenation; convection, salt-finger, by ... 3925
Indonesia; mixing ... 4529
mixed layer; tropics; halocline, barrier layer between ... 5646
structure; circulation, GCM; climate ... 5666
Indian Ocean; South Atlantic; water masses, exchange ... 5681
sloping, propagation on; trapped waves, equatorially ... 5707

thermocline: stratified
mixed layer; model ... 3278

thermocline turbulence
Baltic Sea, model ... 5726

thermocline ventilation
fluid dynamics ... 5731

thermohaline circulation
Atlantic; Pacific; inter-ocean circulation modelled ... 3285
model development and flow dynamics ... 3290
self-oscillations ... 3868
global, changes; water vapor transport, as cause; energy-salinity balance climate model ... 3948
World Ocean ... 4368
multiple equilibrium states ... 4393
auto-oscillations ... 4397
ice ages ... 4694
Indian Ocean; Pacific ... 6166

thermohaline convection
catastrophe structure ... 5122

thermohaline fronts
Tokyo Bay, mouth ... 6193

thermohaline inversions
finestructure, step-like; water column ... 4537

thermohaline stratification
self-sustaining heat exchange pump ... 4335
intrusions, dynamics; fluid dynamics ... 4548

thermoluminescence
properties; Canada, Cumberland Sound; sediments, deglacial 5286

thermoluminescence dating
electron spin resonance dating; seminar proceedings ... 4053

thermometers
acoustic backscatter; temperature, above the seafloor; instrumentation ... 3263

thermoregulation
seabirds ... 4903

thermostat hypothesis
global warming ... 6528

thickening plate theory (More at PLATE TECTONICS ...)

thiosulfates
seawater, determination in; sulfites ... 6278

Third World (More at DEVELOPING COUNTRIES ...)

tholeiites (More at IGNEOUS- ...)

thorium
Black Sea, disequilibria in; uranium ... 3493
-230; Quaternary, Late; sediments; sea level, reconstruction 3606
depth profile; Lau Basin, core; sediments ... 5293

Thraustochytridae
novel duel role in the sea; bacterivory ... 6503

Thunnus
thunnus; North Atlantic, NW; elements, 24, concentrations; tuna, bluefin, in ... 4948

Thyasiridae
deep-sea, morphology; Atlantic; Bivalvia ... 4276

Tibet
crust, uplift; collision tectonics ... 4737

tidal circulation (More at CIRCULATION ...)
tidal currents (More at CURRENTS ...)
Delaware Bay ... 4437
zooplankton, horizontal transport ... 4842
meltwater; fjord circulation ... 5022
Korea, Gyeonggi Bay; boundary shear velocities ... 6176
M_2; California: Gulf of; flow, residual ... 6197
tidal dispersion
role; estuaries, and bays ... 6194
tidal flats (More at FLATS ...)
sediments, muddy and sandy; geochemical processes ... 3545
tidal flow
in; turbulence, kinetic energy hysteresis ... 4539
tidal flushing
India, W, Amba River Estuary ... 5693
tidal friction
Earth rotation; history of science ... 4352
tidal fronts (More at FRONTS ...)
influence; phytoplankton, distribution and productivity; in Korean, English abstract ... 5462
tidal harmonics
composite; representation, analysis ... 3305
analysis; India, stations ... 5695
tidal inlets
shoreline dynamics, on low drift coasts ... 5260
tidal intrusion fronts ... 5683
tidal marshes
evapotranspiration ... 6025
tidal plumes
generation; nutrients; productivity ... 4998
tidal power (More at POWER ...)
tidal sedimentology
clastic; symposium papers ... 6335
tide gauge<s> (More at GAUGES ...)
tide pools
intertidal height effects; diatoms, communities ... 5567
tides (More at SEA LEVEL ...)
Argentina; Rio de la Plata, Estuary; storm surges ... 3306
extreme; North Sea, and Danish Belts, operational hydrographic warning system; storm surges ... 3465
sediment transport, fine ... 3544
dynamics; Baja California, coastal lagoon; plankton communities ... 4219
possibility of rapid changes; Fundy: Bay of; Saint John, records ... 4436
tables, 1992; North America, W coast; South America, W coast; Hawaiian Archipelago ... 4438
tables, 1992; North America, E coast; South America, E coast; Greenland ... 4439
slowing effect; Earth rotation ... 4440
North Sea, model; storm surges ... 4442
particulates, trajectories around shallow banks ... 5057
signal diffusion; embayments, frictionally-dominated ... 5058
S_1; perplexing component ... 5059
South Africa, Sundays River Estuary; sea level ... 5061
damped tidal Helmholtz oscillator ... 5062
anomalous; Australia ... 5690
and tidal power simulations; Passamaquoddy Bay; Maine: Gulf of, E; circulation ... 5691
model; Irish Sea; Celtic Sea ... 5692
rivers; stage-discharge relationship ... 5694
models; North Sea; currents, ADCP data ... 5696
and discharge events, during; salt balance; tropical estuaries 6163
Florida, Sebastian Inlet; weather, episodic, influence; currents, residual ... 6195
radiational, semidiurnal; China, coasts, along ... 6198
tides: internal
fjords ... 4474
Suruga Bay; sea level, influence on ... 5709
Japan, off Fukushima ... 6213
Sagami Bay; Suruga Bay; currents ... 6214
tidewater glaciers
sedimentation, processes ... 3322
ice calving, velocity, and water depth ... 3352
tin
organotin compounds; Tokyo Bay; Bivalvia; Mytilus, edulis 4949
butyltins; Skeletonema, costatum; degradation, and biosorption; diatoms, and associated bacteria ... 4956
TBT; Bivalvia; Crassostrea, gigas, abnormal shell thickening 5570
TBT, and diuron, combined effects; periphyton communities; pollution-induced tolerance ... 5577
TBT toxicities; biocides; tributyltin; antifoulants ... 6076
Tintinnida
Barents Sea; microplankton ... 4197
abundance, distribution in autumn; Weddell Sea; marginal ice zone ... 4930
Tintinnidiidae
ecology and biogeography; Southern Ocean, Atlantic sector; Ciliata ... 4300
Chesapeake Bay; Nolaclusilis, bicornis n.gen., n.sp. ... 4304
Tintinnina
abundance, composition; Argentina, Bahia Blanca ... 4929
Tiran Island
internal block; Red Sea Rift, junction with Dead Sea transform; tectonics ... 4149
titanium
dissolved; estuaries ... 4622
Tokyo Bay
Bivalvia; Mytilus, edulis; tin, organotin compounds ... 4949
mouth; thermohaline fronts ... 6193
hypoxia, aoshio water ... 6523
tomography: acoustic
modal; El Niño, monitoring ... 3383
signal processing ... 4522
tomography: diffraction
seismic tomography ... 3525
tomography: seismic
diffraction tomography ... 3525
East Pacific Rise, 12°N; spreading center, imagery ... 6410
Tonga Trench
slopes, rock recycling; gravity flows; tectonics ... 3537
slopes; magmatism, within-plate ... 3651
topographic waves (More at WAVES ...)
topography (More at FLOOR ...)
over; vorticity, barotropic propagation ... 3387
over; stratified flow; fluid dynamics ... 5732
diapirism ... 6432
topography: bottom
North Pacific, W, relief characteristics ... 4067
North Pacific; gyres, subarctic, seasonal cycle ... 5026
topography: dynamic
geoid, anomalies; mantle plumes; convection structures, applications to Earth and Venus ... 3659
topography: mantle
mapping the 660-km discontinuity ... 5957
400-km discontinuity ... 6427
tourism
impacts; Caribbean area; coral reefs ... 5602
towed vehicle<s> (More at VEHICLES ...)
towing (More at OCEANOGRAPHIC APPARATUS ...)
towing fish (More at fish, OCEANOGRAPHIC APPARATUS ...)
toxic blooms
Maine: Gulf of; Alexandrium, tamarense; currents, alongshore transport in ... 4201
Maine: Gulf of, SW; phytoplankton ... 4202
Norway; Prymnesium, parvum ... 4825
effects; mariculture; fisheries ... 5608
cyanobacteria, Trichodesmium; zooplankton ... 6065
toxic chemicals
dioxins, chlorinated, and related compounds ... 4337
toxicities
acute, acid volatile sulfide as predictor; sediments; metals, Cd, Ni ... 3801
chronic; Brachyura, crabs; chemicals, ethyl parathion, isobutoxyethanol ester of 2,4-dichlorophenoxyacetic acid .. 4322
of construction materials; plastic, recycled; wood, chromated-copper-arsenate-treated ... 4325
debatable; PCBs; organochlorines; report ... 4378
Dinoflagellata, toxic; bacteria, are they involved? ... 4938
sediments; chemicals, concentration ranges associated with adverse biological effects ... 4952
Penaeidae; Metapenaeus, monoceros; insecticides ... 4957
acute; New Zealand; Amphipoda, 2 infaunal spp.; cadmium ... 6075
toxicity testing
recommendations; petroleum; oil, products ... 6073
toxins
brevetoxins; red tides; detection by enzyme immunoassay ... 3684
correlation analysis with species present; phytoplankton 3725
vinyl chloride, stability analysis; aquatic ecosystems; biota . 5576
trace analysis
seawater; manganese ... 3469

ultra-; variability of estimated detection limits 3472
direct coupling of supercritical fluid extraction/supercritical fluid chromatography; hydrocarbons, PAH determinations .. 3520
laboratories, intercomparison exercises; ICES 5229
rare earths; seawater, preconcentration in 6277
NMR spectroscopy; natural waters; organic matter, LMW compounds 6286
trace elements (More at ELEMENTS ...)
Black Sea, over; aerosols, composition 3454
natural waters; cathodic stripping voltammetry 3474
sorption; Rhone River; suspended matter, surface reactivity; relations 4025
San Francisco Bay, Estuary 4046
and mineral matter; Yellow Sea, inputs to; aerosols 4611
Tasmania, Macquarie Harbor; humic matter; organic matter, sedimentary; chemistry 5216
Bermuda, and Barbados; aerosols 5774
trace gases (More at GAS ...)
trace metals (More at METALS ...)
water samplers, estuarine 3466
natural waters, determination in 3470
seawater, coastal and shelf; review of measurements, ICES and JMP labs 3477
New Jersey, estuaries and offshore waters; organic matter, DOC 3516
Mediterranean Sea, Thau Lagoon; in French, English abstract 3521
mobility; sediments, cohesive; geochemical characterization .. 3825
partitioning; aerosols, polluted, released from; coastal zone, seawater 4047
suspended matter; particulates; ICES intercomparison exercise 5210
Cochin Estuary; India 5231
productivity, in oceanic waters 5458
productivity, limits on; seawater, low concentrations in 5485
tracers
seawater; gas exchange; sulfur hexafluoride; helium, -3 . 3473
tracers: circulation
NO; Weddell Sea 3888
trade winds (More at WIND ...)
Trans-Atlantic Geotraverse (Use TAG)
transducers (More at OCEANOGRAPHIC APPARATUS, SOUND ...)
transform faults (More at FAULTS ...)
transgression<s> (More at SEA LEVEL ...)
transgression
Pliocene; Alaska, N 5318
Holocene, Mid- and Late; Baltic Sea, Polish coast 5328
transmission electron microscopes, microscopy (Use TEM)
transport (More at FLUID DYNAMICS ...)
transport: advective
sediment-water interface, beneath 3541
fluid dynamics; vorticity, baroclinic singular geostrophic .. 4542
transport: atmospheric
and deposition; iron 5218
interhemispheric; ice sheets, Greenland and Antarctic; volcanic ash 5891
transport: bedload
intertidal zone, sandflats; fauna, passive transport 4072
transport: current
Antarctic Circumpolar Current, Indian sector; fronts ... 3880
Florida Current; heat flux 4413
transport: freshwater
by oceans 4400
Papua New Guinea, Gulf of Papua, Fly Delta; sedimentation, effects on; benthic processes 4996
transport: mass
and heat; convection; fluid dynamics 5117
transport: nutrient
Louisiana; bayous 4021
relative importance of biotic, abiotic vectors 6289
transport: pollutant
coastal zone, model 6113
transport: river
suspended matter; coastal zone 5811
transport: sand
Bristol Channel; bedload, mutually evasive transport pathways 3539
Bristol Channel; bedload, parting model 3543
transport: sediment
fine; tides 3544
bedload; larval recruitment, Mya arenaria 4248
longshore; India, coast 5253
in oscillatory sheet flow 5271
seabed; instrumentation, data logger and platform 5833
longshore; India, coast 6324
Canada, Fraser River Estuary; saline intrusions, over 6329
estuaries; shelf; modelling exchanges 6334
transport: tropospheric
and mixing; Pacific, E, over 5751
transport: water vapor
as cause; thermohaline circulation, global, changes; energy-salinity balance climate model 3948
trapped waves (More at WAVES ...)
CTW; California: Gulf of; observations, theory compared .. 3900
equatorially; thermocline, sloping, propagation on 5707
trawling
beam-, effects; North Sea, S; sediments, sandy; macrofauna 5504
trawling: shrimp
effects; South Carolina, sounds; benthic communities ... 5516
trawls (More at OCEANOGRAPHIC APPARATUS ...)
trenches (More at LITHOSPHERE ...)
in; internal waves 5084
Triassic
and Lower and Middle Jurassic; Ireland, SW, off; Fastnet Basin; sediments, stratigraphy 4112
North Sea, Beryl Basin; sedimentation, tectonic and climatic controls 4692
Triassic-Jurassic boundary
bolide impacts, Manicouagan; mass extinction; dates incompatible 3588
sediments, shocked quartz 4107
tributyltin
biocides; tin, TBT toxicities; antifoulants 6076
Trieste: Gulf of
evaporation; heat flux; air-sea interactions 6247
Trinidad
hydrocarbons; biota 6081
triple junction<s> (More at LITHOSPHERE ...)
triple junctions
Afar triangle; Ethiopia; tectonics, evolution 3626
tritium
Black Sea; helium; neon 3482
profiles; Weddell Sea 3859
North Pacific, W 3894
bomb-related; precipitation, distribution in, 1960-86 5161
analysis; seawater 5176
trophic dynamics (See also eutrophication, food chains, nutrients ...)
food webs, analysis through field measurement of per capita interaction strength 3689
coupling; Chesapeake Bay, Rhode River Estuary in fall; plankton, rotifers, microflagellates, bacteria 3699
and water turnover time; Brazil; coastal lagoons 3803
analysis; food webs, C pathways 4186
Portugal, Tagus Estuary; estuarine communities 6481
tropical biogeography
Pacific 5451
tropical cyclones
simulations with Betts convective adjustment scheme; comparisons 3449
storm forecasting; role of aircraft reconnaissance 3461
analyses; application of GMS data 3980
sea level pressure, minimum; wind speed, maximum 3982
Philippines; new rule of CI number determination in Dvorak technique 3983
thermal wake modelling 4605
storm forecasting, intensity prediction 4613
Caribbean area, islands, 1969-89 5764
South Pacific; Indian Ocean, SE; 1989-90 season 6261
Guam, Joint Typhoon Warning Center; storm forecasting, challenges 6273
tropical estuaries
salt balance; tides, and discharge events, during 6163
Tropical Experiment (Use TROPEX)
tropical storms
Pacific, equatorial, origin in 3981
formation; El Niño, ENSO, relationship 5767
tropical stratosphere
Quasi-Biennial Oscillation 3440
tropical waves (More at WAVES ...)
tropics
temperature, subsurface; statistical interpolation scheme 3265

precipitation, rates 3448
Pacific, W; atmosphere, multiscale phenomena 4591
rainfall; precipitation, forecasts, climatologies 4604
Atlantic; altimetric and hydrographic data compared 5021
over; radiation, OLR anomalies 5125
evaporation, parameterization, sensitivity to; ECMWF model 5172
ocean conditions diagnosis, 1990; Pacific 5643
mixed layer; thermocline; halocline, barrier layer between 5646
ocean dynamics; circulation; theory, computation 5665
ocean dynamics; Atlantic, equatorial; Rossby waves; W boundary scattering 5746
Tropocyclops
spp.; Copepoda, from Brazil; key to American spp. 4294
troposphere (More at ATMOSPHERE ...)
chlorine, elemental and $ClNO_2$ 5770
Pacific, over; nitric oxide; ozone 6264
tropospheric aerosols
Pacific, tropical; particles, sea-salt 6270
tropospheric hydroxyl
implications for; oceanic consumption of CH_3CCl_3 3457
tropospheric transport
and mixing; Pacific, E, over 5751
tsunamis (More at WAVES ...)
waves, reflected from the coasts 3896
abnormal propagation; earthquakes, Mariana, 1990 4456
compared; Mediterranean Sea; Pacific 4459
105 kya; Australia; coastal erosion, catastrophic 4703
earthquakes, tsunamigenic 5429
sediment failures; Norway, Storegga slides, simulation 5699
run-up, modelling; bathymetry, relevance 5703
warning system; positioning requirements 5705
Mediterranean Sea 5706
genesis; seismicity; crust, *T*-phase spectra, seismic moments . 6438
Tsushima Warm Current
currents; Kuroshio, warm filament 5682
water masses; mixing; fuzzy set study 5684
water masses, source; currents 5686
tube dwellers (More at FAUNA ...)
tuna
bluefin, in; North Atlantic, NW; Thunnus, thunnus; elements, 24, concentrations 4948
Tunicata
filtration by; seawater; melanin, colloidal 4200
Pyrosoma atlanticum; phytoplankton, standing stock, impact on; grazing; organic matter, carbon, flux 6454
Turbellaria
platyhelminths; biology; symposium proceedings 4278
turbid estuaries
light, diffuse attenuation coefficient 3369
turbidite<s> (More at SEDIMENTS ...)
turbidites
and contourites; Paleogene, -Neogene; U.S., mid-Atlantic rise; sedimentation, history 5333
turbidity currents (More at CURRENTS ...)
British Columbia, Bute Inlet; flow, properties 4422
dynamic Reynolds stress modelling 6226
Glacier Bay, Queen Inlet; delta sediments; slope processes, submarine channels 6333
turbidity meters (More at METERS ...)
turbulence (More at FLUID DYNAMICS ...)
geostrophic, transition to; flow, stable, from, in thermally-driven sea 3390
does it peak there?; equator, near 3392
spectra; clouds, stratocumulus boundary layer 3439
near-bed, characteristics and structure; channels, salt marsh, macrotidal 3918
waves, wavelet transforms 3927
an unsolved problem; fluid dynamics 3933
role; mud flocs, settling 4088
dynamics; velocity shear, vertical, effects 4527
anisotropy and dissipation; stratification, stable 4535
upper ocean dynamics; bubbles, clouds 4536
evolution; shear flow, stratified 4538
kinetic energy hysteresis; tidal flow, in 4539
structure; Alaska, coast; atmospheric boundary layer ... 4581
influences; photosynthesis; phytoplankton 4827
fluid dynamics; filtering approach 5729
turbulence: atmospheric
fronts, atmospheric and oceanic; air-sea interactions 4574
turbulence: geostrophic 4399
turbulence: thermocline
Baltic Sea, model 5726
turbulent air flow
waves, generation 4466
turbulent boundary layer (More at BOUNDARY LAYERS ...)
turbulent convection (More at CONVECTION ...)
turbulent diffusion
channel flow; models 5724
turbulent energy
dissipation; mixed layer, upper oceanic; air-sea interactions 4577
turbulent flow (More at FLOW ...)
fluid dynamics 3934
turbulent friction
fluid dynamics 5116
turbulent heat flux
sea ice, beneath 5110
turbulent transport (More at TRANSPORT ...)
Turkey
River Goksu and Tasucu Delta; sediments; elements, concentrations 5234
Turonian
and early Senonian; Tethys, African; carbonate platforms, evolution; margin, segmented continental 3574
Tursiops
truncatus, feeding station; Australia, Moreton Island; Cetacea; porpoises 4876
type specimens
zoological, inventory; Seto Marine Biological Laboratory; laboratories 4969
typhoon<s> (More at STORMS ...)
typhoons
near; wind, remote sensing and ships' data compared 3972
vicinity; clouds, motion; wind field, estimates 3973
activity; North Pacific, W; climate, variation 3979
Tyrrhenian Sea
sediments; interstitial water, chemistry 3554
N; biota, edible species; mercury, content 4942
E; shelf deposits; sediments, collapse and flow 5867
magnetic field; seamounts, Magniagi 6370
volcanoes; seamounts, Magniagi, Vavilov, Marsili 6401

U. S. Virgin Islands
St. Croix; Mollusca, skeletal distributions; hurricanes, Hugo 3535
Uca
pugnax, effects of washing; Brachyura; oil spills 6070
U.K. (See also British Isles, Great Britain ...)
Crown Estate; seabed mining; implications for the future .. 3835
contributions to S budget; North Atlantic, from; sulfur, natural species 3986
Clyde Estuary, water column; Amoebae, naked 4298
Holocene, Late; North Sea; sea level, trends compared ... 4441
Dyfi Estuary; sediments, classification, Pejrup approach 5303
offshore, Clair area; Devonian, -Carboniferous; sedimentation, changing provenance 5317
waters around; radioactivity; seawater 5799
ultrabasites (More at IGNEOUS- ...)
ultraviolet radiation (More at RADIATION ...)
U.N. Conference on Science and Technology for Development (Use UNCSTD)
U.N. Conference on the Law of the Sea (Use UNCLOS)
U.N. Environmental Program (Use UNEP)
undation theory (More at TECTONICS ...)
underwater habitat<s> (More at HABITATS, DIVING ...)
underwater vehicles (More at VEHICLES ...)
undular bores
flow, analysis; waves 6207
universe
contributions from; life 5012
universities
research; indirect cost rates 4347
role; climate change, research 4991
upper layer (More at LAYERS ...)
upwelling (More at OCEAN ...)
regime; South Africa, between Cape Point and Cape Agulhas 3301
wind-driven; currents, lower-layer, effects 3302
caused by; chlorophyll; patchiness 3728
and downwelling; Brazil, Cabo Frio; biomass; productivity, primary; responses compared 4836
Guinea: Gulf of 5055

India, W margin; sediments, record 5295
Pacific, E tropical; productivity 5469
influence; nutrients, water column concentrations; salt marshes, fluxes 5810
increasing seasonal; South Atlantic, past 700 kyr; Foraminifera, planktonic 5888
Quaternary; Pacific, equatorial, changes inferred from temperature record; productivity 5890
upwelling: coastal
Benguela Current, ecosystem; Cnidaria, planktonic, effects on; wind, reversals 3721
Australia, Bonney coast 4434
Peru, central, off; sediments, Quaternary, proxies 5892
upwelling zones
Baja California, off; chlorophyll, -a variability; in Spanish and English 3696
Canary Upwelling; bottom boundary layer 3877
Foraminifera, planktic; phytoplankton 5494
identification; Chile, Mejillones del Sur Bay 5689
Spain, NW, Galician shelf; phytoplankton, size classes 6004
uranium
Black Sea, disequilibria in; thorium 3493
geochemistry; Black Sea; sediments 3546
uranium dating (More at DATING ...)
uranyl
dissolved complexed species; seawater, artificial 4001
urea
determinations, method; seawater 5807
U.S.
SW; Antarctica, E; Australia, and Laurentia, Pacific margins; plate tectonics, reconstructions; supercontinents; discussion 3631
Gulf coast; petroleum, correlations based on branched acyclic alkanes 3674
wetlands; policy 3832
Savannah River, Estuary; sediments, origin 4098
1993 budget; research, and development; report 4348
1993 budget; science; research; report 4349
National Science Foundation; National Institutes of Health; under harsh scrutiny; report 4350
1993 budget; science; research; selective growth 4351
federal plan reviewed, report; global warming; climate change, data 4376
North Atlantic, coast; margin, divergent, formation 4734
E coast; continent-ocean transitions; Moho, imaged 4766
Oil Pollution Act; oil spills; law; pollution 4985
climate change; greenhouse effect; global warming, response to 4988
mid-Atlantic shelf, slope and rise; sediments; silt, fraction, mineralogy 5298
mid-Atlantic rise; Paleogene, -Neogene; sedimentation, history; turbidites, and contourites 5333
Volcano Hazard Program; volcanism; hazard assessment . 5409
SE shelf; iodine, speciation; fronts, across 5825
middle Atlantic coastal plain; Quaternary, stratigraphy; sea level, history 5894
Navy Operational Global and Regional Atmospheric Prediction Systems; atmosphere, analyses; weather forecasting .. 6272
Fleet Numerical Oceanography Center; oceanographic modelling, and products 6513
Fleet Numerical Oceanography Center operations and products; numerical modelling; forecasting 6514
politics and policy; CZM; shoreline dynamics; buildings, and federally subsidized insurance 6518
Europe; Japan; international politics; global commons; groping for new definition of roles 6520
U.S. Coastal Zone Management Act (See also CZM ...)
U.S. National Meteorological Center
weather forecasting; new global operational analysis system . 3460
U.S.S.R.
V.L. Wagin's collection; Dendrogastridae, Ascothoracida; designations of lectotypes 3780
utilization: resource
competition; predation; coral reef grazers 6446

Valencia Trough
Mediterranean Sea, W; crust, evolution, vertical movements 5916
geology and geophysics; Mediterranean Sea; rift tectonics 6318
geodynamics; lithospheric heat flow 6376
Catalan margin; crust, structure, evolution 6377
Tertiary; Mediterranean Sea, W; crust, structure; sedimentation, history 6383
margins; crust, structural development; paleomagnetism, data 6385
Mediterranean Sea, W; sedimentary basins, origin 6389
Cenozoic; magmatism; volcanism, and structural evolution, relationship 6402
crust, coda-Q 6409
and its borders; crust, deep configuration 6415
Messinian, surface; paleogeography, implications 6418
Lion: Gulf of; crust, seismic profiles 6425
Neogene; Iberian Peninsula; Catalan Cordillera, coastal; crust, vertical movements, constraints on extension 6426
and surrounds; seismicity 6428
detailed interpretations; crust, structure, velocity profiles 6429
Neogene; Iberian Peninsula, E margin; crust, structure, evolution 6433
crust, structure, velocity profiles 6436
valleys: rift
axial, and deeps; Red Sea; crust, implications for thinning processes; tectonics 4131
vanadium
dissolved, distribution; Canada, E coast 4042
Vancouver Island
Phaeophyta; Fucus, distichus; population dynamics 4305
seabirds 4898
gas hydrates; methane; sediments, seismic reflectors 5858
vehicles (More at OCEANOGRAPHIC APPARATUS, VESSELS ...)
velocity shear
vertical, effects; turbulence, dynamics 4527
vent fauna
Japan, elemental compositions; seep communities; in Korean, English abstract 6474
Okinawa Trough, Mid-; stable isotope ratios 6475
Pacific; Ostracoda 6500
ventilation
Black Sea; salinity, and density; temperature 3269
artificial, passive; hypoxic estuaries; feasibility study 4336
gyres, eastern subtropical; circulation 5650
ventilation: thermocline
fluid dynamics 5731
vents
focused venting; accretionary wedges; sediment failures, and fluid flow, seepage force; channels, headless submarine canyons 6350
vents: hydrothermal
minerals, formation 4684
near; bottom boundary layer 4686
near; metalliferous sediments; neodymium, scavenging residence time 5872
areas; Juan de Fuca Ridge; Axial Volcano; heat flux ... 5934
Venus
Earth; Mars; planetary tectonics, structures 6444
Versatile Experimental Kelvar Array (Use VEKA)
vertebrates
abundant; coastal zone, sardine-rich ecosystems; population dynamics, and trends, factors influencing 3686
history; fossil record; evolution 4706
vertical flow
velocity; estimation 3852
vertical structure (More at STRUCTURE ...)
vertical tectonics (More at TECTONICS ...)
vessel icing
temperature, sea, near-freezing; prediction; discussion 3462
vessels (See also barges, icebreakers, naval architecture, semisubmersibles, ships, submersibles, tankers, vehicles ...)
burning oil supertanker; fires, plumes; whirlwinds, formation 4617
Vestimentifera
growing on; North Atlantic; shipwrecks 5625
vibrations
seismoacoustic; internal waves, as cause; acoustics 4501
Vibrio
spp., RNA content variations during starvation and recovery; bacteria 3759
Victoria Delta
Australia, N; sediments; bedforms, chenier sequence development 5262

Vietnam
coast; sediment microflora; reef periphyton 4939
Viking Graben
North Sea; sediments, thermal state; exploration well data .. 3622
Vine-Matthews hypothesis (More at PLATE TECTONICS ...)
Virginia
James River Estuary, facies model; estuarine sediments 4099
virology: marine
viruses; educational 3844
viruses (See also enteroviruses ...)
marine virology; educational 3844
widespread occurrence and clonal variation; phytoplankton, cause of lysis in 4268
viscosity flow (More at FLOW ...)
viscous remanent magnetism (More at magnetism ...)
volcan<ism> (More at IGNEOUS- ...)
volcanic arcs
model; Thailand, new Permo-Carboniferous geochemical data 3639
volcanic ash (See also tephra; more at ash ...)
ice sheets, Greenland and Antarctic; atmospheric transport, interhemispheric 5891
Iceland, Lake Torfadalsvatn; deglaciationast, high-resolution record 5881
volcanic emissions (More at AEROSOLS ...)
carbon dioxide; atmosphere, contributions to 5407
volcanic eruptions
climatic effectiveness; discussion 3423
Iceland, Hekla, 1991 4746
Mount Pinatubo, Philippines, 1991; stratosphere, effects; climate, effects 4750
Mount Pinatubo, 1991; basalt trigger? 4753
Alaska, Katmai, June 1912; geophysical and geochemical observations 5399
volcanic gases
hydrocarbons, sampling, analysis 3644
volcanic glass (More at GLASS ...)
speciation of water 5933
volcanic islands
Jan Mayen; Norwegian Sea, -Greenland Sea; crust, basal complex petrology, geochemistry 5937
volcanic rocks
Japan: Sea of, DUPAL anomaly; Pb, Nd, and Sr isotopic variations 3666
effusive; Kurile Arc; isotope geochemistry 4788
Lau Basin; geochemistry 5392
glasses; Lau Basin; composition 5394
petrology; Lau Basin 5396
origin, alteration; Lau Basin; North Fiji Basin 5406
Ce and Nd isotopics; Bonin Arc; Solomon Islands; mantle, sources 5935
volcanism
Cenozoic, Late; Japan, northern Honshu; sedimentary basins, development; tectonics; relationships 3603
Macdonald Seamount, 1989; submarine eruptions; gas-rich exhalations 3640
and geochronology; French Polynesia; Society Islands; hotspots; in French, English abstract 3641
source region; subduction zone 4744
basaltic; South America, Parana; Africa, Etendeka; mantle plumes; rifting, mechanics of 4747
intensity; spreading zones, structural development 4751
role; seamounts; crust, MAR, construction 4754
Cenozoic; South China Sea, N, and Guangdong coast; in Chinese, English abstract 5404
U.S., Volcano Hazard Program; hazard assessment 5409
Guadeloupe, La Soufriere 5410
South Pacific; crust; mantle, exposed; faults, Garrett transform 5423
submarine eruptions, preceding; earthquakes, 1979 Ito, rupture process 5960
evolution; Lesser Antilles; Martinique; petrogenetic implications 6398
and structural evolution, relationship; Cenozoic; Valencia Trough; magmatism 6402
volcanism: hotspot
mantle plumes 5936
volcanoes
gravitational spreading; Mount Etna; tectonics, evolution .. 5924
Tyrrhenian Sea; seamounts, Magniagi, Vavilov, Marsili ... 6401
volcanoes: mud
Mariana Arc, forearc 4064
volcanoes: submarine
activity; methane, anomalies; helium, -3 anomalies 4139
volcanology
computer software; geochemistry; mineralogy; petrology; applications 4060
von Humboldt: Alexander
unpublished manuscript; Gulf Stream 4355
Vøring Plateau
Outer; Cenozoic; basin subsidence 3629
margin, extensional; magmatic-tectonic evolution 4745
vortices (See also maelstroms; more at FLUID DYNAMICS ...)
vorticity
potential; mixed layer, role; thermocline, main 3289
barotropic propagation; topography, over 3387
lens-like; stratified fluids; fluid dynamics 3403
potential, quasigeostrophic; circulation; polytopic vector analysis and EOF analysis compared 3862
balance estimates; currents 3873
quasigeostrophic; fluid dynamics 3938
motion and evolution modelled; hurricanes 3984
baroclinic singular geostrophic; fluid dynamics; advective transport 4542
Langmuir circulation 5114
circulation, vertical; fronts, at 5658
cooling spirals; gyres, subtropical; circulation, re- 5676
potential, anomalously high; cyclogenesis, rapid 5766
barotropic, merging; Gulf Stream; rings 6232
vorticity: atmospheric
transport; climate, models 3967
vorticity flux
countergradient, generated; boundary currents 3398
Voss: Gilbert L.
Cephalopoda; memorial symposium 4245
Vredefort Dome
an enigma; South Africa; symposium report 3664

Wadden Sea
German; sediments; chemical analysis, multielement determinations; sample preparation, techniques 3550
wakes
ships', in stratified loch; internal waves 6215
wakes: ship
films, surface-active, redistribution 5112
Walvis Bay
environmental indices; Foraminifera, planktonic; sediments, Late Holocene 5342
war
aftermath; Persian Gulf; Kuwait, and environs; environmental impact; remote sensing data sets 3830
1991; Persian Gulf; fisheries, effects on; preliminary report . 6110
Ward Hunt Ice Shelf
ancient strata, structure; sea ice 3342
Arctic area; ice, physical properties, structure, stratigraphy .. 3343
warming: climate
Northern Hemisphere; greenhouse effect; ice sheets, will they grow? 3422
major; Cretaceous, Mid-; mantle plumes; hotspots 3840
warming: global
temperature, diurnal, evidence for asymmetric changes 3420
U.S., federal plan reviewed, report; climate change, data ... 4376
Antarctica; climate change, evidence 4377
greenhouse effect; statistical hypothesis 4562
response to; U.S.; climate change; greenhouse effect 4988
climate modelling; limits 5009
climate change; global change debate, research 6133
climate change, on trial 6140
greenhouse effect; albedo, increase 6246
climate change, ecological consequences; sea level, rise 6525
thermostat hypothesis 6528
warming: polar
possible; Eocene, Early; methane, as cause 5893
warming: water column
South Pacific, W 5136
waste (See also effluents, spoils, sewage, sludge, tailings; more at POLLUTION ...)

waste discharges
liquid; North Sea, coastal waters; environmental impact .. 3827
waste disposal (See also disposal, dumping, outfalls, more at POLLUTION ...)
sewage sludge 3823
South Africa, Durban; impact of liquid discharges 4319
sewage sludge; England, NE coast; sediments, trends; benthos, trends 5612
wastewater outfalls
Antarctica, McMurdo Station; mixing characteristics 6119
water (See also seawater, freshwater-seawater interface; more at OCEAN ...)
geochemistry; hydrogen, isotope composition; magma, tholeiitic 3648
mantle; minerals, anhydrous, role 4755
content; mantle minerals 6526
water: anoxic
deep; Baltic Sea; Ciliata 6463
water column
stratified, effects on; ocean-atmosphere interactions; meteorological forcing, response to 3434
Black Sea; iodine, speciation 3484
Black Sea; sulfur, speciation and sulfide oxidation 3512
hydrographic variability; phytoplankton, mesoscale heterogeneity 3700
upper, structure and evolution; Southern Ocean, Scotia-Weddell Confluence; marginal ice zone 3911
Weddell Sea; iron 3996
oceanic; radioactivity, natural, finestructure 4009
Southern Ocean; barite, formation 4031
upper; Ross Sea; silica, biogenic, cycling 4040
critical depth; primary production 4223
upper, inhomogeneity and instability; acoustics, near fields, effects on 4523
thermohaline inversions; finestructure, step-like 4537
wintering in?; Dutch Wadden Sea; Phaeocystis, colonies . 5460
circulation; shipboard prediction with regional forecast model 5639
premonsoon hydrography; Arabian Sea; circulation 5641
Korea, East Sea; temperature, vertical structure; currents; in Korean, English abstract 5642
thermohaline structure; Norwegian Sea; circulation 5652
Korea, East Sea; currents; water masses, chemistry; in Korean, English abstract 5687
Korea, adjacent to; currents; in Korean, English abstract ... 5688
Southern California Bight; methane, subsurface maximum 5801
Bengal: Bay of, Madras coast; sediments; mycoflora; fungi 6034
internal oceanic variability; seasons, as forcing cycles; circulation 6171
Taiwan, NE, off; manganese, distribution; in Chinese, English abstract 6279
Ocean Station P; carbon dioxide, dissolved, seasonal variability 6284
scavenging in; Taiwan, NE, off; radionuclides, Th, U 6298
stability, effects; Biscay: Bay of, Cantabrian Sea; phytoplankton, size and biomass succession patterns 6450
seasonal changes; Tasmania, Bathurst Harbor Estuary; plankton, distribution 6455
Baltic Sea, central; denitrification; in German 6483
hydrography; Magellan: Strait of, Project; sediments; circulation 6511
effects on; Arabian Sea; monsoons; particulates 6529
water column warming
South Pacific, W 5136
water: interstitial
chemistry; Tyrrhenian Sea; sediments 3554
water level chamber
fluctuating; marshes, tidal; for biogeochemical experiments .. 5787
water masses (More at OCEAN ...)
Mediterranean underflow characteristics; Black Sea, SW, in; currents 3280
exchanges; Spain, Ria de Vigo and the coastal shelf; coastal zone 3282
Balearic Islands, around; in Spanish, English abstract 3298
Atlantic Water; Ionian Sea, NE, influence 3299
Bass Strait Water; Tasman Sea; thermocline 3300
North Atlantic Deep Water; Southern Ocean; sediments, evidence from; climate, effects on 3418
conversion; North Pacific, glacial subarctic; physical constraints, stable isotope record 3613
W Pacific warm pool; Pacific, W tropical; ocean-atmosphere interactions; circulation, air and sea 3858
deep-water formation; Weddell Sea; circulation 3869
transformation; Weddell Sea, S 3884
tracers of; Southern Ocean; helium; chlorofluorocarbons 3887
exchange; Southern Ocean; World Ocean, emphasis on Atlantic sector 3890
formation; North Atlantic 3891
biochemistry; Southern Ocean; circulation; collection 3893
Namibia, off, 1986; circulation 4396
penetration; Cape Hatteras, shelf N of; Gulf Stream 4425
transport; rings, warm-core 4427
and water systems; North Pacific, W subarctic; in Japanese, English abstract 4428
exchange; Antarctica, Lutzow-Holm Bay; ice, fast, beneath . 4429
Subarctic Front; North Pacific, W 4433
modification; Agulhas Retroflection; convection, by 4533
tracers; Silicoflagellata, distribution; rings, 82B 4867
East Sea Intermediate Water; Korea, Ulleung Basin; in Korean, English abstract 5051
Korea, around Cheju-Do; circulation; in Korean, English abstract 5052
North Atlantic, E of Azores 5053
exchange; Norwegian Sea; North Atlantic 5054
Mediterranean Sea, E, Euboikos Gulf; flow, features 5678
exchange; Indian Ocean; South Atlantic; thermocline .. 5681
Tsushima Warm Current; mixing; fuzzy set study 5684
making and application of multivariate membership function; in Chinese, English abstract 5685
source; currents; Tsushima Warm Current 5686
chemistry; Korea, East Sea; water column; currents; in Korean, English abstract 5687
Magellan: Strait of, hydrology; mixing 6154
exchange; straits; flow 6167
Brazil-Malvinas Confluence; South Atlantic 6187
East China Sea; mixing, characteristics 6188
contribution to; Orinoco River, outflow; Caribbean Sea, superficial waters; in Spanish, English abstract 6189
surface; North Atlantic, E, April and August; Foraminifera, planktic, as indicators 6190
formation and evolution; East China Sea, winter dense water 6191
water: pore
chemistry; marsh soils 4071
water: precipitable
World Ocean, remote sensing over; humidity, surface 3940
water quality
and ecotoxicology monitoring; microalgal metabolism 4947
New Brunswick, coastal areas; phytoplankton 5986
water samplers
estuarine; trace metals 3466
large-volume; instrumentation, automatic 4848
water sampling (More at SAMPLING ...)
water vapor
physical variation; atmosphere; carbon dioxide; relationships 3453
water vapor transport
as cause; thermohaline circulation, global, changes; energy-salinity balance climate model 3948
watersheds
balance; Potomac River, Basin; nitrogen; phosphorus ... 5806
differential transport through; nitrogen; phosphorus; sewage, -derived N and P 6123
wave<s> (See also Beaufort scale, oscillations, sea state, solitons, surf, surges, swash, swells, tsunamis, wind-wave interactions ...)
wave climate
variations; Europe, seas around 4573
wave damping
and surface pressure, effects; surfactants, organic; seawater . 3314
films, natural; surface tension; wind, properties 5081
rain, effects 5149
wave dynamics (More at FLUID DYNAMICS ...)
wave forces
on organisms; natural selection; biota, evolution, body form 4327
bottom velocities; estimation 6100
wave gauges (More at GAUGES ...)
wave height
zero-crossing, and periods; sea state, stationary 4458
surface, instantaneous; currents; GPS data 5907
wave power (More at POWER ...)
wave recorders (More at RECORDERS ...)

wave scattering
underwater obstacles ... 4446
wave-current interactions
computed; currents, equivalent uniform ... 4408
waveguides: acoustic
tomographic imaging ... 4498
perturbation theory ... 4506
waves
stationary vortical; shear flow, on ... 3307
dispersive travelling; standard form and method of averaging ... 3311
whitecaps; bubbles, volumetric description ... 3317
incoming, role in dynamics; marginal ice zone ... 3361
reflected from the coasts; tsunamis ... 3896
action flux estimation ... 3897
surface roughness, length fluctuations; wind ... 3901
attenuation, roll motion; sea ice, beneath ... 3908
small-wave modulation; electromagnetic field, bias ... 3914
shear stress; seabed, rippled, roughness; currents, combined flows ... 3917
wavelet transforms; turbulence ... 3927
propagating; flow, quasi-geostrophic; fluid dynamics, isallobaric effects ... 3937
New Jersey, site-specific controls on processes; estuarine beaches; wind ... 4073
transformation outside and inside the breaker line ... 4443
resonantly interacting progressive; observations, model ... 4444
pattern formation; beaches, sloping, on ... 4445
statistics comparison ... 4448
directional spectra; marginal ice zone; estimation using linear prediction ... 4450
efficient elliptic solvers for the mild-slope equation ... 4451
long; Atlantic, equatorial ... 4453
shear instability ... 4460
run-up, prediction; beaches ... 4461
SAR imagery; modelling ... 4462
wind, drift, drag equations for ... 4464
images, statistical parameters; surface, structural dynamics ... 4465
generation; turbulent air flow ... 4466
records, length; influence on frequency distribution of heights and periods ... 5063
statistics; India, coast ... 5064
formation, growth; flow ... 5067
ripples, parameters ... 5068
parameter estimators; buoys, heave, pitch and roll ... 5069
x-band; wind speed; temperature ... 5070
groups; propagation ... 5074
surface; Hamiltonian formulation ... 5075
nonlinearity and phase couplings; sea state ... 5080
shallow-water, unbroken progressive; shoreline dynamics; sedimentary processes, hydrodynamics ... 5254
sediments, incipient motion; currents ... 5261
velocity field beneath; drift ... 5599
parabolic wave models ... 5698
properties by the phase-time method ... 5701
kinematics; laser Doppler anemometry ... 5702
SAR imagery; theory ... 5704
Grand Banks, W; Newfoundland; sedimentation, transgressive; currents ... 5846
statistics; India, coasts ... 6199
near-breaking, beneath; boundary layers, fluid-granular ... 6200
spectra estimation; signal processing, SAR imagery ... 6201
setup; run-up; beaches ... 6202
data; stochastic time-series representation ... 6206
flow, analysis; undular bores ... 6207
energy dissipation; currents, and bottom friction ... 6208
nonlinearity; swell; phase couplings ... 6209
numerical model ... 6210
component interactions and irregular wave kinematics ... 6211
waves: acoustic
propagation; time-domain paraxial approximations ... 4517
propagation; on fluid-loaded plate ... 4518
waves: atmospheric
air currents; coastally-trapped; review ... 3970
selective amplification in CISK model ... 3971
Kelvin-Helmholtz; frontal inversions ... 4599
waves: barotropic
radiation; Gulf Stream, from ... 3898
waves: breaking
gas bubbles, depth, lifetime ... 3920
air-sea interface; gas exchange, rates ... 4566
random; engineering algorithm ... 5066
air-sea interface; gas transfer ... 5150
bottom friction, effects ... 6203
on beaches; stellar atmospheres, shock waves; analogy ... 6233
waves: compressional
speed; Mexico: Gulf of; sediments ... 3557
waves: convective
transient; Indian Ocean, SW ... 3975
waves: edge
beaches, sloping; uniform asymptotics ... 5077
waves: electromagnetic
reflection at sea surface ... 6085
waves: frontal
upstream; blocking, diabathic; model study ... 3394
waves: gravity
surface; numerical solution of the kinetic equation ... 4455
surface; propagation over submerged bar ... 5076
waves: inertial
fronts, subtropical, in ... 4475
waves: interfacial
instabilities and bifurcations ... 6212
waves: internal
modelling propagation ... 3319
gravity; mixing ... 3320
instability near a critical level ... 3321
gravity; parametric instabilities ... 3903
Japan: Sea of; shelf, water column and hydrophysical properties ... 3904
Lomonosov Current, transformation in ... 4467
inertial-gravity; vertical finestructure generation ... 4468
effect of near field of a point source on generation ... 4469
-vortical mode spectrum; energy transfer ... 4470
instability; shear flow, stratified ... 4471
and currents; interactions ... 4472
nonlinearity effects ... 4473
field, in; flow, effects; surface films ... 4476
wind; noise, ocean, influence on ... 4491
as cause; vibrations, seismoacoustic; acoustics ... 4501
fluid dynamics; Green's function behavior in a compressible medium ... 4543
generation; fluid dynamics ... 4544
shelf circulation, response ... 5083
trenches, in ... 5084
gravity; scattering off random bottom topography ... 5711
gravity; fluid dynamics, stratified ... 5730
gravity; geophysical fluid dynamics, dissipative effects ... 6204
wakes, ships', in stratified loch ... 6215
waves: internal gravity
caused by; fronts, thermal; reflections from slope ... 3892
waves: Kelvin
equatorial; Pacific; sea level, as monitor ... 4435
evolution in nonuniform ocean ... 4449
double; fluid dynamics, viscous, diffusive; properties ... 4551
waves: lee
Florida, S of Key West; ADCP measurements ... 5708
waves: Rayleigh
incident; continents, boundaries ... 4760
waves: Rossby
reflection; exchange of fluid masses ... 3400
solution of the Laplace tidal equations ... 3899
topographic; localization ... 4452
El Niño, 1935-46 ... 4569
Atlantic, equatorial; tropics, ocean dynamics; W boundary scattering ... 5746
waves: seismic
velocity; Japan: Sea of, Yamato Basin ... 4144
mantle, upper, attenuation in ... 4770
waves: seismic shear
sediments, and rocks, predicting velocities in ... 6348
waves: solitary
and hydraulic falls; flow, two-layer ... 4457
waves: standing
stability and form in deep water ... 3315
waves: surface
short; evolution on very long surface wave ... 5073
waves: trapped
CTW; California: Gulf of; observations, theory compared ... 3900
equatorially; thermocline, sloping, propagation on ... 5707
waves: wind
directional spectrum estimates; in Spanish and English ... 3308
growth; Japan: Sea of, during winter monsoon; fetch, with ... 3309
forced wave energy ... 3312
quasilinear theory applied to forecasting ... 3313

modulation; by long surface waves (in wave tank) 3316
statistical characteristics in the gravity and capillary ranges 4454
spectra 4463
sound, transmission in waveguides, influence on; acoustics .. 4492
growth; films, surface 5065
simulation 5072
breaking; detection in deep water 5082
seafloor nonlinear effects 5700
wax esters (More at ORGANIC COMPOUNDS ...)
weather
synoptic; Southern Hemisphere; scatterometry, satellite, from 3410
solar cycles; geomagnetic field, variability; climate 3417
transitions; South Africa, S of; Agulhas Current, over 3431
Indian Ocean, SW; climate; variability 3939
patterns; climate, shifts; ocean-atmosphere interactions . 4558
due to; Baltic Sea, over; solar radiation, variability 5736
episodic, influence; Florida, Sebastian Inlet; currents, residual; tides 6195
weather forecasting
National Meteorological Center; new global operational analysis system 3460
long-range, impacts on; surface temperature, anomalies 3463
long-range; El Niño, winter; first successful forecast; report .. 4373
clouds, satellite composite climatologies; atmosphere 4601
skill (5-day); cyclones, prediction 4615
U.K. Meteorological Office; surface; heat flux; freshwater, fluxes 5785
FOAM model; Atlantic; Arctic Ocean; ocean-atmosphere interactions 5786
U.S., Navy Operational Global and Regional Atmospheric Prediction Systems; atmosphere, analyses 6272
Australia, BMRC tropical limited area model 6274
long-range, impact on; surface temperature, anomaly 6275
weathering (More at EROSION ...)
Himalayan; Ganga-Brahmaputra River, system; Bengal: Bay of, fluxes to; strontium, isotopes; rubidium 5794
chemical; Cenozoic, during; subduction, of pelagic carbonates; carbon cycle, implications 6353
weathership stations (Use appropriate station designation)
Weddell Sea
winter; sea ice, dynamics 3334
major mechanisms of ice growth; sea ice, texture 3347
over; atmospheric temperature; remote sensing, retrieval scheme 3412
winter; sea ice; nutrients, status 3497
seabirds; mammals, marine; spring distributions and ecological role 3685
tritium, profiles 3859
water masses, deep-water formation; circulation 3869
S; water masses, transformation 3884
circulation tracers, NO 3888
Scotia Sea; Antarctica, Weddell-Scotia Confluence; metals, Cd, Cu, Fe 3995
water column; iron 3996
and Scotia Sea; silica, biogenic, distribution; organic matter, POC, composition; particulates 4027
organic matter; particulates, C and N isotopic variations .. 4029
surface and bottom water; dimethylsulfide 4036
sediments; organic matter, carbon flux; oxygen, penetration 4101
-Scotia Sea, during ice retreat; carbon, cycling; phytoplankton; microbiota 4210
Scotia Sea; biogenic silica 4224
NW, simple model for; primary production 4234
late winter; gyres, biology, hydrography; regional relationships 4365
Maud Rise effects; stratification; circulation; gyres, Weddell 4389
zooplankton 4859
Tintinnida, abundance, distribution in autumn; marginal ice zone 4930
aluminum, dissolved 5178
Scotia Sea; krill; fecal pellets; particle flux, role in 5813
-Scotia Sea, during winter; particulates, biogenic; nutrients; productivity; nitrogen, uptake 5978
zooplankton; community structure; sea ice, beneath 5999
shelf and slope; Mollusca; Bivalvia, fauna, distribution 6012
Isopoda; Ceratoserolis, egg size and composition 6046
Caridea, reproductive biology 6049
E; Isopoda, distribution 6050
Scotia Sea; marginal ice zone; plankton, and other biota, ecology; *Polarstern* study 6094
NW, South Orkney Plateau margin; Quaternary; sedimentation 6340
S margin; Quaternary, Late; paleoceanography; glaciology 6359
Scotia Sea; zooplankton, proto-, abundance and feeding ecology; marginal ice zone 6460
Weddell-Scotia Confluence
aluminum, dissolved, effects; silica, biogenic, dissolution kinetics 4006
spring; ammonium, regeneration 4017
suspended matter, composition 5812
predators, top, as indicators of ecosystem events; marginal ice zone 5974
Cryptophyceae; phytoplankton, nanno- 5976
Weddell-Scotia Sea
plankton, respiratory electron transport activity 5981
krill, sexual development 6048
West Africa
petroleum; report 5965
West Antarctic Ice Sheet
Ice Stream B; Tertiary, and Quaternary; fossil record, microfossils; ice sheets, beneath 3604
West Antarctic Rift
System; Ross Sea, area; rifting 3623
system; rifts; geophysical investigations 6319
westerlies (More at WIND ...)
Western Tropical Atlantic Experiment
WESTRAX; Atlantic, W tropical; overview 6095
wetlands (More at COASTS ...)
U.S.; policy 3832
whales
minke, food and daily food consumption; Cetacea 3736
baleen, blubber; Cetacea; organochlorines, heterogeneous distribution; implications for sampling procedures 3798
killer; Cetacea; Orcinus, implications for the evolution of foraging specializations 4243
isolated, endangered; Cetacea, Saint Lawrence belugas 6008
whaling
commercial; Cetacea; International Whaling Commission, could end ban; policy, and law 6137
setting catch limits; International Whaling Commission; conservation politics; science and sentimentality 6519
wharf biota (More at BIOTA ...)
whirlwinds
formation; vessels, burning oil supertanker; fires, plumes 4617
Wilson cycle (More at PLATE TECTONICS ...)
wind<s> (See also breezes, easterlies, gales, monsoons, squalls, tradewinds, westerlies ...)
wind
California, central, off; circulation, response 3435
forcing of; Quaternary, Late; Indian Ocean; monsoon circulation; model results 3576
reversals; Benguela Current, ecosystem; Cnidaria, planktonic, effects on; coastal upwelling 3721
surface roughness, length fluctuations; waves 3901
various velocities; bubbles, flux; aerosols, marine, spectra ... 3965
remote sensing and ships' data compared; typhoons, near 3972
New Jersey, site-specific controls on processes; estuarine beaches; waves 4073
drift, drag equations for; waves 4464
internal waves; noise, ocean, influence on 4491
fronts; surfactants, images revealed by; slicks 4584
satellite-derived, impact; hurricanes, tracks; storm forecasting 4616
currents, effects on 5045
properties; films, natural; surface tension; wave damping 5081
surface, data; air-sea interface, worldwide fields; rainfall, Sahelian, variability 5152
due to; Labrador Current; zooplankton; patchiness, decay 5495
response to; air-sea interactions; circulation, GCM 5747
speed; gas exchange; air-sea interface 5749
extreme; hurricanes, gust factors 5753
monsoons; Bengal: Bay of; Andaman Sea; wind-driven circulation 6160
atmosphere, models 6257
wind field
Mediterranean Sea, W 3443
estimates; clouds, motion; typhoons, vicinity 3973
wind flow (More at FLOW ...)
wind: katabatic
evolution; Antarctica, coastal zone 5752

wind power (More at POWER ...)
wind speed
maximum; sea level pressure, minimum; tropical cyclones 3982
temperature; waves, x-band 5070
wind stress
measurement; surface, over 3902
alongshore; circulation, in the pycnocline, effects on; air-sea interactions 4571
Southern Ocean; ECMWF vs Hellermann and Rosenstein climatology 4593
wind stress curl
boundary currents, eastern; seasonal cycle 3441
wind: surface
Pacific, W equatorial; El Niño 3442
wind waves (More at WAVES ...)
directional spectrum estimates; in Spanish and English 3308
growth; Japan: Sea of, during winter monsoon; fetch, with . 3309
forced wave energy 3312
quasilinear theory applied to forecasting 3313
modulation; by long surface waves (in wave tank) 3316
statistical characteristics in the gravity and capillary ranges 4454
spectra 4463
sound, transmission in waveguides, influence on; acoustics .. 4492
growth; films, surface 5065
simulation 5072
breaking; detection in deep water 5082
seafloor nonlinear effects 5700
wind-driven circulation (More at CIRCULATION ...)
Celtic Sea; Irish Sea; model 3271
Adriatic Sea, N 3279
Bengal: Bay of; Andaman Sea 5037
evolution 6158
Bengal: Bay of; Andaman Sea; wind, monsoons 6160
Bengal: Bay of; Andaman Sea 6173
wind-driven currents (More at CURRENTS ...)
fluctuations; North Atlantic, E; correction 3296
windmills (More at POWER ...)
wind-wave interactions (More at AIR-SEA INTERACTIONS, WAVES ...)
Winkler titration
potentiometric, gran linearization; chemical analysis 5185
wire rope (More at ROPE ...)
Wombalano
yerang, n.gen., n.sp.; Great Barrier Reef; Amphipoda, corophioid 3788
women
science; tenure; careers 4989
science; careers; physical oceanography 4990
wood
chromated-copper-arsenate-treated; plastic, recycled; toxicities, of construction materials 4325
wood boring organisms (More at ORGANISMS ...)
Wood: R.W.
greenhouse effect, and greenhouses; overlooked experiments . 5003
work chamber<s> (More at CHAMBERS ...)
world hunger (More at hunger, food ...)
World Ocean (More at oceans ...)
emphasis on Atlantic sector; Southern Ocean; water masses, exchange 3890
remote sensing over; humidity, surface; precipitable water . 3940
interhemispheric contrasts of anomalies; surface temperature 3944
elements, dissolved; geochemical system 4039
Degens: Egon T.; biogeochemistry; geoscience; memorial volume 4363
thermohaline circulation 4368
bulk chemical characteristics in; organic matter, dissolved ... 4627
Phanerozoic; strontium, isotope record 4688
nutrients, provinces in the sea 5201
Pacific; circulation; currents; modelling, ocean prediction . 5638
role; global carbon cycle 5824
silica, biogenic; oxygen, isotopic studies; temperature, changes recorded 6366
Wurm-Wisconsin
deglaciation; sea level, histories, global 4701

Yamato Basin
Japan: Sea of; crust, velocity structure 6412
Yellow Sea
inputs to; aerosols; trace elements, and mineral matter 4611
currents, LF variation 5674
yellow substance (More at ORGANIC COMPOUNDS ...)
Yermak Plateau
Fram Strait; Arctic area; winter oceanographic conditions . 4386
Yhi
yindi, n.gen., n.sp.; Great Barrier Reef; Amphipoda, paracalliopiidae 3771
yield per recruit analysis
fisheries management; gear selectivity 4343
Younger Dryas
NW Pacific; sea level; salinity, Japan Sea; relationships 5329

Zabargad Island
Red Sea; gneisses, granulite, Pan African age for; rifting, implications for 4155
Zaire River (See also Congo River)
zinc
distribution; California: Gulf of; sediments, surface; in Spanish and English. 3555
phytoplankton; seawater, feedback mechanisms in 6001
suspended matter; particulates, sorption on 6281
Mexico: Gulf of; copper; episodic event effects on concentration, speciation 6522
zonal currents (More at CURRENTS ...)
zones (See also aphotic-, photic-, surf-, swash-, tectonic- and tidal zones; more at ATMOSPHERE, LITHOSPHERE, OCEAN, SEDIMENTS, FRONTS, GRADIENTS, INTERFACES, LAYERS, STRUCTURE ...)
zoobenthos (More at BENTHOS ...)
zoogeography
provinces; Humboldt Current; Benguela Current; Leeuwin Current; currents, major 4187
zooplankton (More at PLANKTON ...)
meso- and micro-, structure; Spain, Galician shelf; biomass, and production; in Spanish, English abstract 3692
surface dynamics; Red Sea, Gulf of Aqaba 3702
distribution; Balearic Sea; in Spanish, English abstract 3710
meso-, neritic; Adriatic Sea, S; seasonal variation 3719
micro-; Adriatic Sea, S; annual vertical distribution 3723
Red Sea; Aden: Gulf of; community metabolism 3724
by; sound scattering 3726
and their environment; Inland Sea, of Japan; Mexico: Gulf of; diel variation 4199
effects on clearance and swimming behavior; particles, large, nongrazable 4203
abundance; North Carolina, mesohaline estuary; community structure 4214
Bivalvia; grazing, rates 4815
gelatinous; Southern Ocean 4829
North Sea 4834
benthopelagic, feeding ecology; Pacific, E tropical; seamounts 4837
distribution; Japan, off Sanriku, and Oyashio Water; Copepoda; in Japanese, English abstract 4841
horizontal transport; tidal currents 4842
mortalities; fjords; freshwater, discharges 4844
changes; Riga: Gulf of; eutrophication 4846
Madeira Abyssal Plain; macroplankton, deep-sea, contributions; mineralization, re-, organic 4850
Gulf Stream; nitrogen, particulate; rings, warm-core, 86A; N-15 abundance 4857
Weddell Sea 4859
patchiness, and vertical migration; rings, warm-core, 82-H .. 4872
swarms; krill, Antarctic; biological and acoustic characteristics 4926
scattering layers 5463
exchanges; Biscay: Bay of, S; Arcachon Basin 5467
Beaufort Sea, winter; community structure 5470
distributions; mixed layer, dynamics; simultaneous measurements 5474
small; plankton counters, optical 5477
deep-water; Ligurian Sea 5479
meso-, impacts of; Prince Edward Islands; phytoplankton 5489
and micronekton, vertically migrating; Southern Ocean, archipelago; Prince Edward Islands; predation, land-based, impact 5490

Baltic Sea, N coast; community structure; planktivory, dynamics, effects 5493
Labrador Current; patchiness, decay; wind, due to 5495
McMurdo Sound 5982
seasonal cycle; British Columbia, SW, off 5988
effects on; Saint Lawrence: Gulf of, outflow; Nova Scotia, shelf communities 5996
Weddell Sea; community structure; sea ice, beneath 5999
tidal and seasonal variations; India, Pullavazhi 6000
feeding ecology; Sweden, W coast; grazing; phytoplankton blooms 6003
collection, effects on; sediment traps, treatments; microbiota, limiting activity 6030
cyanobacteria, Trichodesmium; toxic blooms 6065
small vs large; Chesapeake Bay; ammonium, regeneration and grazing 6301
Copepoda, grazing impact; phytoplankton; size structure relationships 6449
proto-, abundance and feeding ecology; Weddell Sea; Scotia Sea; marginal ice zone 6460
composition, distribution; Benguela Upwelling; Namibia, off 6464

zooplankton biomass
North Sea; productivity 3708
Beaufort Sea 3712
Oyashio, waters, variations in; in Japanese, English abstract .. 4847
zooplankton communities
coastal lagoons; spatial restructuring and hydrodynamics; in French, English abstract 3713
spatial patterns; temperature, satellite-measured SST 6002
zooplankton entrainment
Sweden; power plants 4951
zooxanthellae
symbiotic microalgae; corals, and sea anemones, release after cold shock 3747
Zostera
capensis; seagrasses; river impoundments, effects 5560
marina; nitrogen, dynamics; eelgrass beds; high growth, low nutrient period 5565
noltii; Arcachon Basin; eelgrass, importance; heavy metals, budget; in French, English abstract 6063